

1913.

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LEGISLATIVE ASSEMBLY.  
NEW SOUTH WALES.

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# REPORT

OF THE

DIRECTOR-GENERAL OF PUBLIC HEALTH

NEW SOUTH WALES,

FOR THE YEAR ENDED 31ST DECEMBER,

1914.

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*Ordered by the Legislative Assembly to be printed, 16 December, 1915.*

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SYDNEY: WILLIAM APPIEGATE GULLICK, GOVERNMENT PRINTER.

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1915.

[7s.]

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1914

**Offices of the Director-General of Public Health, 93 Macquarie-  
street, Sydney.**

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**Branches and Institutions controlled by the Director-General of Public Health :—**

Executive and Clerical Staffs.  
Epidemic, and Sanitary Inspectorial Branches.  
Microbiological Laboratory.  
Chemical Laboratory.  
Pure Food Branch.  
Dairies Supervision, and Cattle Slaughtering Branches.  
Meat Export Branch.  
Hospital Admission Dépôt, and Ambulance Service and Disinfecting Station,  
Woolloomooloo Bay.

**State Hospitals and Asylums, Convalescent Homes, and Sanatoria, including :—**

Coast Hospital for General and Infectious Cases.  
Leper Lazaret.  
David Berry (General) Hospital.  
Lady Edeline Hospital for Babies, "Greycliffe," Vaucluse.  
Strickland Convalescent Home for Women, "Carrara," Rose Bay.  
Denistone Convalescent Home for Men, Eastwood.  
Waterfall Sanatorium for Consumptives.  
Rookwood State Hospital and Asylum (Men).  
Liverpool State Hospital and Asylum (Men).  
Newington State Hospital and Asylum (Women).

**Parramatta Homes :—**

- (a) Macquarie-street Asylum for the Blind, and for Men suffering from defective sight, and senility.  
(b) George-street Asylum for Aged and Infirm Men.  
(c) Cottage Homes for Aged Couples.

### Board of Health.

Paton, M.D., Brux., Robert Thomson	...	Director-General of Public Health.
Fosbery, C.M.G., M.L.C., The Hon. Edmund	Member Board of Health.	
Walcot.		
Mackellar, The Hon. Sir Charles Kinnaird,	Do	do
Kt., M.B., C.M.		
Stuart, Sir Thomas Peter Anderson, Kt., M.D.	Do	do
Robinson, Augustus Frederick	... .. Do	do
Foreman, M.R.C.S. (Eng.) Joseph	... .. Do	do
Purser, Cecil, M.B., Ch.M.	... .. Do	do
Chairman, Chamber of Commerce (The Hon.	Do	do (ex officio).
F. E. Winchcombe, M.L.C.)		
The Rt. Hon. the Lord Mayor (R.W. Richards)	Do	do (ex officio).
Flynn, Emanuel John	... .. Do	do

### Head Office Staff.\*

Paton, M.D., Brux., Robert Thomson	Director-General of Public Health.
Armstrong, M.B., D.P.H., William	Senior Medical Officer of Health.
George.	
Suckling, M.B., Ch.M., Frank	Assistant Medical Officer to the Government.
Martin.	
Chapple, Alexander Tennant, M.B.,	Do do do
Ch.M.	
Palmer, M.B., Ch.M., Arthur Aubrey.	First Government Medical Officer for Sydney.
Cahill, M.B., Arthur Charles...	... Second do do
Neely, Thomas Henry	... .. Secretary.
Potter, James Julius	... .. Chief Clerk.
Thornthwaite, Ernest John	... .. Accountant.
Lake, Alfred	... .. Inspector of State Hospitals and Asylums
Tompkins, Henry James	... .. Clerk.
Ranshaw, John James	... .. Do
Creagh, Stephen Thomas	... .. Do
Alexander, Cecil Eustace	... .. Do
Tunks, Arthur Malcolm	... .. Do
Boyle, John James Valentine	... .. Do
Carroll, Frederick Launcelot	... .. Do
Gordon, William James	... .. Do
Stark, Marlon Roxburgh Varley	... .. Do
Willcock, Mabel	... .. Shorthand-writer and Typist.
Sparks, Lessie Florence	... .. Do do
Pattle, Jessie Ethel	... .. Do do
Thompson, Gladys May	... .. Junior Clerk.
Gillam, Walter	... .. Do
Carrick, Herbert Thomas James	... .. Attendant.
Roberts, Virgil	... .. Do
Heyward, Daniel Frazer	... .. Do
Cummins, Rupert Emmett	... .. Messenger.
McElhinney, James	... .. Night Officer.

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\* Staffs at the various Branches are shown in the reports of each institution.

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# REPORT of the Director-General of Public Health to the Honorable George Black, M.L.A., Chief Secretary and Minister of Public Health.

Sir,

I have the honor to present herewith my Report for the year 1914.

The reports of the various heads of branches and institutions of the Department show that many important extensions have taken place for the year under review.

The administrative work is constantly on the increase, necessitating the closest supervision. Apart from the Acts administered by the Department—such as the Public Health Act, Pure Food Act, Dairies Supervision Act, Cattle Slaughtering and Diseased Animals and Meat Act, Private Hospitals Act, Noxious Trades Act, certain sections of the Federal Commerce Act, &c.—there are other Acts and regulations which have to be carefully observed with a view to the safeguarding of public health. First among such is the Local Government Act and the ordinances thereunder. When the work incidental to the various State Hospitals, Asylums, and Convalescent Homes is added to this list, it will be seen that, apart from the more important functions, a vast amount of detail is involved.

It has been well said that the general good health of any community is its very best asset. Every well organised Government has the inherent right to protect the health and provide for the safety and welfare of its people, and it is upon the Health Department that the duty of protecting the health of the citizens devolves. Anything regarded as inimical to health or life within the State comes within its purview, and remedial measures are immediately sought.

As soon as population begins to congregate to any extent in a locality, it is necessary for attention to be directed to it by the Health authority. If there is any doubt about the suitability of the site chosen for erecting dwellings it must be examined and action taken. Steps have also to be taken to see that adjacent water-courses are not likely to be polluted by drainage; the buildings themselves must be so arranged with respect to the access of light and air that the health of the inmates is conserved; and provision must be made for the removal and destruction of wastes. These and other equally important matters receive attention by this Department.

## GARBAGE DISPOSAL.

From a health point of view, the question of disposal of household wastes cannot be over-estimated. As is well known, house garbage contains a large proportion of organic matter. This organic matter, during process of putrefaction, evolves very offensive gases, and nuisances arise very freely from such aggregations. There is a very real danger from these accumulations of refuse, as they form a breeding-place for flies and other insect pests, which it is now well recognised are frequently the carriers of infection.

For many years the Department of Public Health has urged upon the local authorities of municipalities, particularly those surrounding the metropolis, the importance of doing away with their garbage tips, and replacing them with up-to-date destructors in which refuse is destroyed by fire. It is quite recognised that in isolated country districts, where there is suitable land available, to tip the refuse on the land is permissible if proper means are taken to cover and mix the material deposited with clean earth, so as to prevent its becoming a

nuisance. In the suburbs of a great city where suitable land is in most cases extremely difficult, if not impossible, to acquire, and where it is difficult to select a site sufficiently remote from habitations, the use of garbage tips can only be condemned in the strongest terms. Up to the present, very few of the metropolitan municipalities have followed the advice which this Department has been constantly giving on this subject. Just recently the whole question of garbage disposal in the metropolitan area has received considerable attention, not only by the Health Department, but also by the civic authorities concerned, and has been the subject of much comment in the Press, but the matter has not yet been satisfactorily settled.

At the present time, outside the City of Sydney, the only suburbs which treat their garbage by incineration are Leichhardt, Annandale, Balmain, and North Sydney. In many instances the immediate cause of this hesitation of municipalities to adopt up-to-date methods is the primary expense attached to the installation of good destructors. Delay in this important subject is not one which can be excused by the question of expenditure. Many of the suburban refuse tips round Sydney can only be spoken of as serious nuisances—if not continuous, at any rate intermittent. The sites usually selected for dépôts are, of course, as a rule as far removed from habitations as practicable. Old clay pits, natural depressions in the surface of the ground, sand-drifts or low-lying swampy lands unfit for building on, are now being filled in with tons of garbage. In some instances public parks are being used for this purpose with the object of improving such places by levelling the ground, filling up depressions, and providing a level grass area. Although the ultimate object may be desirable, the process during its continuance is most objectionable.

A practice which greatly increases the insanitary aspect of these tips is the raking over of the refuse by rag-pickers, &c., to obtain old rags, tins, and other material of small value. This practice has always been deprecated by this Department, and local authorities have been warned against permitting it, but in spite of all directions it continues intermittently at many of the tips.

#### PURE FOOD ACT.

The working of the Pure Food Act of this State since it became law in 1908 has been very satisfactory. The Act is administered with the assistance of a chief food inspector and seven assistant food inspectors. Their powers extend over the whole of the State, and are very fully exercised. In addition to the headquarters staff, many of the municipal sanitary inspectors throughout the State have been appointed as inspectors under the Act for certain purposes. In addition to ensuring that food itself is sound and free from adulteration, the officers of this branch are charged with seeing that premises of every kind upon which foods are prepared, preserved, or packed, are clean. The inspectors are constantly on the alert for adulterated or deteriorated foods, as owners are always desirous of disposing of old stock or an inferior article with the least possible delay. Such material as deteriorated, dried, or preserved fruit is apt to find its way into consumption in the shape of chutnies, sauces, &c.

Premises upon which food is prepared are given constant attention, with a view to ensuring that cleanly conditions are maintained, consequently a great number of butchers' shops, bakeries, cordial manufactories, milk-vendors' premises, sauce, jam and pickle factories, restaurants, fish shops, and numberless other places of a like nature where food is sold, stored, or handled, are frequently inspected by this staff.

It will be seen from the Chief Food Inspector's report (p. 21) that the number of samples of milk collected by officers of the Pure Food



Food Branch in 1914, totalled 3,980, and of other foods 734; 292 samples of milk and 132 other foods were below standard, and 252 prosecutions were undertaken. In the course of the inspections large quantities of food were found unfit for human consumption, and in eight instances prosecutions, were instituted. 3,953 premises in which food was prepared, stored, or sold were inspected; it was found necessary to serve notices for improvement in 1,118 instances; and 152 traders were prosecuted. The total fines collected in connection with this branch of the Department's work amounted to about £1,900.

The exertions of the officers are directed to seeing that the public obtain, as required by the Pure Food Act, supplies of food and drugs of the nature, substance, and quality demanded by the purchaser. Recently samples have been taken for the purpose of analysis of the different brands of infants' and invalids' foods on the market, with a view to testing their composition and suitability for the purposes for which they are sold, and also to ascertain that they are in accordance with their labelled description.

The Government Analyst, in reporting on these samples, refers to the fact that the composition and value of infants' foods has been the subject of special investigation and analysis by him for many years. He points out that most of the artificial foods on the market are deficient in fat, owing probably to the difficulty of incorporating fat in a powder, and also because of its readiness to become rancid. He says that with one or two exceptions all the foods on the market require the addition of fresh cream to make a complete food, and that up to the present there is no infants' food made which is really the equivalent of the mother's milk.

#### ANALYSIS OF FOOD AND DRUGS.

The work of the Analytical Laboratory (p. 18) includes not only the analyses of food and drugs for the purposes of the Pure Food Act, but also waters for domestic use, to test their suitability for various manufacturing and trade purposes and for fish culture. Air from various sources is also tested, and an investigation was recently made into the ventilation of theatres and picture-shows. The results of the test showed that while the audience is fairly well provided with fresh air, in many instances insufficient ventilation is provided for the performers and others behind the scenes. A good deal of medico-legal work also calls for attention from the Government Analyst in connection with cases of suspected poisoning, and his attendance is frequently required at the Coroner's or Criminal Courts.

#### "QUACK" MEDICINES.

A good deal of the time of the Analytical Branch is devoted to examining specially advertised preparations and appliances. Large businesses of a nefarious character have grown up in recent years in all the States as a result of extensive advertising of preparations and appliances which are often harmful, usually quite worthless, and always misleading and dangerous, because in very many cases they prevent sick persons from obtaining proper treatment in time to save them from prolonged or even fatal illnesses.

The advertisements claim that the so-called medicines will cure maladies so widely differing in their nature and symptoms as consumption, cancer, hydatids, and Bright's disease—all of which it is stated can be cured by one and the same mixture—notwithstanding that these diseases have claimed for years the attention of the most eminent and learned scientists of the world in their endeavours to discover remedies for them.

The Department is taking vigorous action for the suppression of these advertising impostors, who are such a menace to the community, not only from the fact that these advertisements are one and all  
fraudulent

fraudulent—inasmuch as they refer to preparations which cannot and do not cure the ailments for which they are recommended—but also from the fact that proper skilled treatment is being delayed.

#### TRANSFER OF STATE BAKERY TO THE DEPARTMENT OF THE ATTORNEY-GENERAL AND JUSTICE.

In November, 1914, the State Bakery was transferred to the Department of the Attorney-General and Justice. This action met with the approval of this Department, as the quantity of bread supplied by the State Bakery to the institutions under the control of the Department of Public Health was very small, owing to the fact that for several years past the bulk of the bread required had been baked at the Macquarie-street (Parramatta) and Liverpool Asylums, and distributed from there.

#### INQUIRIES INTO FOOD SUPPLIES, PRICES, AND STANDARDS.

In 1912, a Royal Commission of Inquiry, appointed in July, 1911, to examine and investigate all matters relating to the food supply of Sydney, presented *interim* reports on the fish and meat supplies. In 1913 Mr. T. R. Bavin was appointed a Royal Commission to continue the investigations, and presented sectional reports during that year on the supply and distribution of milk, bread, fruit, and vegetables.

#### STANDARDISATION OF FOOD PRODUCTS.

At the Interstate Conference of Premiers held at Melbourne in January, 1912, it was resolved that the Chief Medical Officer of New South Wales (Dr. Ashburton Thompson) be constituted a Royal Commission for each State in turn for the purpose of making recommendations with the view to uniform legislation for the standardisation of Australian manufactured food products. This resolution was given effect to almost immediately. Dr. Ashburton Thompson was appointed a Royal Commissioner in March, 1912, and presented his report in December of that year.

In 1913 a Conference was held in Melbourne to consider Dr. Ashburton Thompson's recommendations, and since that date a great deal of work has been done in revising the Pure Food regulations, with the object, as far as practicable, of securing uniformity throughout the Commonwealth. The regulations are very far-reaching in their application, as they apply not only to materials intended for human consumption, but to many other articles—such as soaps, disinfectants, &c.

It is anticipated that these regulations in revised form will be issued during the forthcoming year.

#### SUPERVISION OF THE MILK SUPPLY.

In populous places one of the first matters to demand the attention of the hygienist is the milk supply. A high infantile death-rate, and epidemics of milk-born disease, speedily attract public attention to any laxity in the supervision of dairies or milk-vendors' premises. In this State the Dairies Supervision Act, which was passed in 1886, is one of the important measures which the Department of Public Health is called upon to administer. The work of this branch is conducted by the Chief Veterinary Inspector, whose staff consists of an assistant veterinary surgeon, stationed in the metropolitan district, and fourteen inspectors. The duty of these latter officers is to examine all dairies and dairy cattle in the Eastern and Central Divisions of the State. In the Western Division the Act only applies to limited areas where there is settlement. The fourteen country inspectors are wholly occupied in travelling throughout the dairying districts making detailed inspections of dairy premises as to their structural conditions and state

of



of cleanliness, and examining the dairy herds. To convey some idea of the amount of work demanded of this staff, it may be mentioned that about 19,000 dairymen are now registered in the State, and the cattle comprised in their dairy herds number nearly 500,000. The larger dairying centres on the North and South Coast are divided into districts, and each placed under the supervision of a departmental inspector, who resides at some convenient centre, and visits the dairy premises as often as the size of his district permits. The duty of the departmental inspector is to inquire into the administration of the Act by the local authority, who in municipalities is the local council; and in the unincorporated parts of the State, the senior police officer of the district. As pointed out in my last report, the desire of the Department has been always that the work of these inspectors should be educational, and that structural improvements to dairy premises and the maintenance of a high standard of cleanliness should be secured without recourse to harsh measures, except where more conciliatory treatment has failed to obtain the desired object. In any case where, after one or two warnings, laxity on the part of a dairyman continues, the local authority is required to cancel registration of the premises, and to prevent the supply of milk or cream from them until they comply with the provisions of the Act. Cases are met with where police court proceedings are necessary. During the current year prosecutions were instituted against 138 traders, a conviction being obtained in every case, the fines imposed amounting to approximately £400.

For the purpose of economy and to save duplication of work, the dairy instructors of the Department of Agriculture were authorised as inspectors under the Board of Health, with the object of handing over to them the inspection of butter factories and creameries. This arrangement has now been in operation for a couple of years, and is found to work satisfactorily.

It is very gratifying to the Department to find that its efforts in the direction of improving the milk supply have resulted in raising the general tone of the dairying industry of the State; this is clearly indicated in many of the reports of the inspectors who deal with this particular work. It is evident that if this important industry is to be maintained at a high standard, the inspectorial staff must be constantly on the alert to ensure that the standard required by the Board is closely followed. Another feature that commends itself to the Department is that local authorities who are charged with carrying out the provisions have lately been seeking advice from the expert officers of the Department in regard to various matters connected with the dairying industry—such, for instance, as the selection of a suitable site, construction, drainage, and ventilation, &c., of dairy premises. The adoption of the advice given will result in more hygienic and up-to-date methods being adopted.

#### SUPERVISION OF THE MEAT SUPPLY FOR HOME CONSUMPTION AND FOR EXPORT.

Next to milk, meat is perhaps the article of diet which requires most assiduous care on the part of the guardians of the public health. The Cattle Slaughtering Acts in force prior to 1892 were largely designed to check cattle-stealing, and had little to do with meat inspection for health purposes.

In 1892 an Act was passed prohibiting the sale, consignment, or exposure for sale of diseased animals, or of meat which was diseased, unwholesome, or unfit for the food of man. This was the basis of the meat inspection which now exists.

In addition to organising a staff of trained meat inspectors, the Board of Health appointed about 800 persons under this Act as unpaid inspectors. This staff of unpaid inspectors is composed of Government Medical.

medical officers, municipal inspectors, police officers, and stock inspectors, and they do a great deal of useful work.

The demand of the authorities in Europe and the United States of America requires a high standard to be maintained of the inspection and sanitary handling of exported meat. The Commerce (Trades Descriptions) Act applies to all exports of meat from the Commonwealth, and by an arrangement made with the Commonwealth Government two or three years ago, all inspections of meat for export in New South Wales were handed over to the State Department of Public Health, which established the work as a separate branch under the control of an experienced veterinary surgeon. This officer is assisted by fifteen inspectors of export meat. The inspection of meat killed for home consumption is conducted on the same lines as those laid down for export meat, and this enables the work of the State inspectors of meat to be carried out in the way prescribed by the Commonwealth Government for export inspectors. This arrangement has the effect of making the inspection of meat uniform in this State, and also of enabling the State inspectors to share in handling the export branch of the trade. In addition to the inspection of export meat, the work of the branch includes the supervision of thirteen inspectors employed at the Glebe Island Abattoirs, and six inspectors whose duty it is to supervise all slaughtering carried out at several private slaughterhouses in six of the outlying metropolitan districts.

The extent of the slaughtering trade at the Glebe Island Abattoirs, from which the metropolitan meat supply is largely drawn, is shown by the following figures for 1914:—

Cattle (including calves)	...	...	...	254,585
Sheep	...	...	...	1,807,760
Pigs	...	...	...	65,566

The whole of this slaughtering will, as soon as possible, be transferred to the new Abattoirs at Homebush Bay.

The figures appended for 1914 will show the magnitude of the meat export trade of this State. The canning business in particular is rapidly expanding, and the value alone of the canned meats and meat extracts exported during 1914 are roughly estimated at three-quarters of a million sterling.

Meat and meat extracts, &c., exported during 1914:—

Packages of canned meats	...	...	...	437,429
Packages of meat extracts and essences	...	...	...	7,129
Carcases of mutton and lamb	...	...	...	1,925,756
Carcases of veal	...	...	...	13,296
Carcases of pork	...	...	...	402
Beef quarters	...	...	...	160,385
Packages of meat (other than carcasses)	...	...	...	54,276

The Meat Export Branch has been able to assist the Collector of Customs in the purchase of large quantities of meats for military purposes.

#### PUBLIC HEALTH ACT.

The report of the Chief Sanitary Inspector will be found on page 37. It shows that the work of country towns inspection was continued during 1914, thirty-two towns being inspected or reinspected during the year and full reports submitted. The work is carried out in a very systematic manner, and the reports include a description of the town—its situation, population, climate, soil, water supply, surface and subsoil drainage; sewerage systems, disposal of garbage, liquid wastes, and nightsoil;



nightsoil; the methods adopted for storage and sale of meat, milk, fish, &c., and the conditions of buildings and building areas.

These inspections of country towns are made with a view of ascertaining how the various laws relating to public health are carried out by the local authorities, and also to generally assist and advise them.

*Special Inspections.*—For the purpose of assisting local authorities in country centres seventy-six special inspections were made. This work included investigation of outbreaks of infectious diseases and other sanitary matters requiring urgent attention; reports on insanitary dwellings, unhealthy lands, defective drainage and sewerage, septic tank installations, &c. As a result of the conditions discovered on some of these visits, several prosecutions were undertaken.

#### UNHEALTHY BUILDING AREAS.

Under section 55 of the Public Health Act, which is administered directly by the Board, ten areas were proclaimed unfit for building purposes. These were situated at Austinmer, Bexley, Hurstville (4), Manly, Narrabeen, and Rockdale (2). The areas were either subject to inundation by tidal or storm water, or unhealthy owing to swampy conditions due to the accumulation of storm-water and offensive liquid wastes.

#### NOXIOUS TRADES.

The Noxious Trades Act applies to the whole of the county of Cumberland, the Hunter River combined sanitary district, and to fourteen municipalities and three shires in other parts of the State, extensions being made during the year to Coonamble, Tamworth, and Goulburn. Tables are attached to the Chief Sanitary Inspector's report (page 37), which shows the districts, number the class of trades, and efficiency of local supervision. During 1914, 682 noxious trades licenses were issued.

Many complaints were received during the year of the nuisance caused by noxious trades established at Alexandria and Mascot. For some time inspections were made regularly at night when most of the work was carried on, with the result that proceedings were taken against several traders.

It is hoped that the extensive pollution of Botany Bay, which has occurred for some years past, will be prevented at an early date by the connection of the woolscours and tanneries at Botany with the Long Bay sewer, which is now nearing completion.

#### DESTRUCTION OF RATS.

Three rat-catchers are employed by this Department to trap rats at the different Sydney wharves for the purpose of examining them to ascertain their freedom from plague. During the year an inspection was made of all the Sydney wharves, and it was found that as a consequence of the reconstruction of many of the old wharves and buildings, and the concrete sheathing of the Darling Harbour wharves, less harborage is afforded; and that generally speaking rats are less numerous than formerly. The regular application by the Harbour Trust of a steam jet on the face of wharves and piles also has an excellent effect in keeping down this pest.

This action is taken quite irrespective of the activities of the City Council in regard to destruction of rodents. The duty of keeping down the number of rats in the city devolves upon the City Council.

#### NIGHT CLINICS.

During the last two or three years more than usual attention has been devoted here to the subject of venereal diseases with the object of making

making available adequate and easily accessible avenues of treatment, as it is more and more realised that this is the only method by which persons affected can themselves be secured from the more disastrous effects of these diseases, and other persons be protected from contracting infection.

The first Night Clinic was opened at the Department's Hospital Admission Dépôt in July, 1914, and did excellent work; one night a week being devoted to men and another to women patients.

Later on a Night Clinic for venereal diseases was opened at the Royal Prince Alfred Hospital, where greater facilities for treatment could be provided. This clinic proved a remarkable success in dealing with the disease, the number of persons treated amply demonstrating the absolute necessity which existed for taking special steps in this direction. The attendances at this clinic exceeded those of any other out-patient department at the hospital.

#### HOSPITAL ADMISSION DÉPÔT, &c.

An account of the work of the first and second Government Medical Officers for Sydney is given on page 65.

#### PROVISION IN NEW SOUTH WALES FOR TREATMENT OF PERSONS SUFFERING FROM CONSUMPTION.

The method of operation in combating consumption is by providing nurse-inspectors to visit and advise patients as soon as their unfortunate condition comes to the knowledge of the Department. The information thus obtained affords opportunity for classification of cases into (a) those who can be cared for in their own home and who are well enough to attend at the anti-tuberculosis dispensaries for medical treatment; (b) those cases in which the disease has so far progressed or whose circumstances are such as to require removal to a sanatorium; and (c) those cases in which the disease has made such progress before they come under treatment that little hope can be entertained of their ultimate recovery, and for whose medical care and maintenance permanent provision is required. In connection with the second class of cases mentioned above, it is hoped to establish a farm at Boonoo Boonoo, where patients who have received treatment at a sanatorium and have recovered sufficiently to be discharged, can be given outdoor employment until they are fit to return to their ordinary avocations.

*State Sanatorium at Waterfall.*—The State Sanatorium at Waterfall, containing 370 beds, is the principal hospital in this State for the treatment of consumptives. It is distant about 30 miles from Sydney on the South Coast, and is in charge of Dr. H. W. Palmer, who has made a special study of the treatment of tubercular disease. From Dr. Palmer's report (page 144) it will be seen that during 1914, 826 patients were under treatment at Waterfall; of these, 380 patients were discharged and 130 died. Of the 380 persons discharged, forty had not obtained any apparent relief, and 125 were benefited by their stay; 119 persons were greatly improved and were all capable of doing a fair day's work, although the disease was not actually arrested, while ninety-six persons, or one-fourth of those discharged, had had the disease wholly arrested and were able to return to every-day life.

At the Rookwood State Hospital there is a chest ward where accommodation is provided for 100 male patients who are in many cases unable to stand the strain of the journey to Waterfall; and at Newington State Hospital some ten beds are reserved for women patients similarly situated.

The above institutions are wholly supported by the State.

*State-Aided*



*State-Aided Institutions.*—The Queen Victoria Homes for Consumptives also provide accommodation for persons suffering from pulmonary tuberculosis. One of these homes is situated at Wentworth Falls, and contains accommodation for fifty-four male patients. The other is at Thirlmere, and provides beds for fifty-two female patients. Both institutions are in receipt of Government assistance, and do useful work.

*Institution Receiving no State Aid.*—The R. T. Hall Sanatorium at Hazelbrook also does good work, but its accommodation is limited, and only persons in the early or curative stages of consumption are admitted for treatment. The institution is endowed under the will of the late Mr. R. T. Hall, and does not receive Government assistance.

#### TUBERCULOSIS DISPENSARIES.

In the metropolitan district there are now four dispensaries for treatment of diseases of the throat and chest. The first was opened in Hay-street, Sydney, in 1912, under the auspices of the National Association for the Prevention and Cure of Consumption, and is doing excellent work.

In 1913 similar dispensaries were established at the Royal Prince Alfred Hospital, and the Marrickville Cottage Hospital. These were followed by one at the Royal North Shore Hospital, and quite recently a similar dispensary was opened at Newcastle. Special grants are made by the State towards the upkeep of all these dispensaries.

Not only do patients receive treatment, advice, and instruction from the doctors at the dispensaries, but the nurses attached to the dispensaries visit the patients in their own homes for the purpose of instructing them and the other occupants of the house how to prevent the infection from spreading; and for the guidance and supervision of home treatment. The dispensaries also act as centres for selecting patients suitable for sanatorium treatment or for sending to hospitals the more advanced cases who cannot be safely cared for in their own homes.

#### NEED FOR PROVISION OF ADDITIONAL ACCOMMODATION FOR CONSUMPTIVE PATIENTS.

Additional accommodation is required for male consumptive patients. The present Sanatorium at Waterfall consists of two divisions, the male division containing 230 beds, and the female division 140 beds. The capacity of the male division is always overtaxed, and plans have been prepared for erection of pavilions to accommodate an additional 100 male beds. It is hoped that this provision will permit of withdrawal of most of the consumptive patients from the Rookwood State Hospital, and of classification of the cases under treatment at Waterfall.

Should the additional 100 beds asked for be found inadequate to meet requirements, it will be necessary to consider the advisability of erecting a sanatorium elsewhere for women patients, and of utilising the present female division at Waterfall for male patients.

#### LEGISLATIVE PROVISION FOR PREVENTION OF CONSUMPTION.

Legislative provision is being made in the Public Health (Amending) Bill introduced into Parliament early in 1915, which should give the Department adequate power to materially aid in checking the spread of consumption, as well as to safeguard the public health in many other respects.

Under the proposed amended Act consumption can be made a notifiable disease in areas where such action is deemed necessary.

STATEMENT

STATEMENT showing in ten-year periods the percentages of Deaths of each sex from Pulmonary Consumption in New South Wales since 1875 :—

	Population of the State.			Deaths from Phthisis.			Deaths per million of population.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1875	323,080	271,217	594,297	360	254	614	1,132	953	1,050
1885	523,030	426,540	949,570	629	449	1,078	1,232	1,078	1,163
1895	672,520	589,750	1,262,270	652	364	1,016	976	624	812
1905	765,161	703,992	1,469,153	638	399	1,037	842	573	713
1913*	962,749	869,707	1,832,456	731	479	1,210	769	558	669

\* Latest figures available.

#### ANTI-TYPHOID INOCULATION.

For some considerable time the question of the diminution of the typhoid rate of country towns in New South Wales by means of anti-typhoid inoculation has engaged the close attention of the administrative officers of the Department and the Microbiological Branch. Military statistics had shown conclusively that troops protected by this means showed a remarkable diminution of their attack-rate by typhoid fever and in their mortality from the disease in those few cases in which it was contracted. So striking were these results that it was determined to try and limit the disease in New South Wales by the same means.

On the outbreak of war at the beginning of August it was at once realised by the officers of the Department that it would be essential that all troops leaving for active service in Europe or anywhere abroad, as well as those detailed for service in the Commonwealth of Australia, should be protected by inoculation. Experience in the South African war and in all recent wars has shown that the efficiency of fighting troops may be as much impaired by the incidence of typhoid fever as by the marksmanship of the enemy, and that if the sickness and mortality previously experienced under such conditions from this cause could be materially lessened by protection from disease, it would be equivalent to an increased personnel. As a consequence, the Commonwealth military authorities were at once approached through the Premier of New South Wales to the Prime Minister, as well as directly in conversation between medical officers of the Department and those of the military service. The Department offered to supply, if desired, sufficient anti-typhoid vaccine to protect all troops that might be despatched from any part of the Commonwealth, and also the services of its medical officers for the inoculation of troops as far as might be desired by the Commonwealth authorities. It was recognised that though this would involve a considerable amount of labour, the Microbiological Laboratory had special facilities for doing the work with economy and despatch. The offer thus made was at once accepted by the military authorities, long before full official sanction could be given to the scheme. Time being an essence of the contract, the Department at once pushed forward with the preparation of vaccine, and within a few days of the outbreak of the war commenced its application to the troops just leaving for tropical parts. To these men the first dose of the vaccine was administered with the assistance of officers of the Department. Time not permitting the administration of the second dose, quantities of vaccine for this purpose were placed on board the troopship so that inoculations might be completed on the journey. This was followed immediately by the inoculation of the troops gathered together in New South Wales by officers of the Department in conjunction with the military medical officers, and sufficient anti-typhoid vaccine was, by request of the military authorities, forwarded to each of the capitals of the other States to protect the 20,000 men leaving in the First Contingent. Since this

period



period further large quantities of anti-typhoid vaccine have been made for the use of troops leaving New South Wales and Queensland, and all the soldiers leaving this State have been inoculated by our officers as soon as the military could submit them to this mild operation.

Since the outbreak of war the number of individuals, military and otherwise, who have received two inoculations of the anti-typhoid vaccine at the hands of officers of this Department, probably totals nearly 18,000, whilst vaccine has been supplied sufficient to protect some 50,000 or more to 31st December, 1914.

Advantage was taken of the success attending the inoculation of troops to induce the civil population in towns exposed to infection of typhoid fever to have themselves protected as far as possible by this means. Considerable prominence was given to the subject in the Press, and some country towns took the matter up enthusiastically.

It should be pointed out here that inoculation against typhoid fever does not confer absolute immunity against contracting the disease. It lessens very materially the likelihood of an individual contracting it, and in those cases in which, probably from undue susceptibility, the disease does appear, it tends to run a milder course, with a much diminished mortality. The process itself is a remarkably simple one, and the immediate ill-effects are hardly noticeable. So far, in the large number of individuals treated no serious inconvenience has been reported as the result of inoculation. In the majority of cases, a few hours after inoculation has been made there is a certain amount of local tenderness, and during the next twenty-four hours the individual may feel a little indisposed; but in nearly all instances the symptoms are so vague and indefinite that the patient goes about his business in the usual way.

In view of the proved efficacy of anti-typhoid inoculation, it is very desirable that persons likely to be exposed to infection, especially those living in districts where typhoid fever is prevalent from time to time, should avail themselves of the protection afforded by it.

#### CARE OF THE SICK.

*Extension of Hospital Accommodation in the Metropolitan and Country Districts.*—It was found that provision of hospital accommodation for medical and infectious cases in the metropolitan and many of the larger country districts was quite inadequate, and that daily there were a number of urgent cases of illness for which hospital beds could not be found. A return obtained from the metropolitan hospitals shows that on 31st December, 1914, 52 patients were waiting for admission to the gynæcological wards of the Royal Hospital for Women, and 46 patients for admission to the Royal Prince Alfred Hospital. The number of patients awaiting admission to the Sydney Hospital could not be stated, but were known to be considerable.

To meet the growing demands necessitated by the expansion of population, it was decided that the accommodation at the Coast Hospital should be increased, and a scheme was drawn up by which this hospital is being gradually replaced by new and commodious buildings, which, when completed, will provide accommodation for 840 patients, and will include an infectious division of between 300 and 400 beds. The foundation stone of the first unit of the new hospital was laid on 7th November, 1914, by the Premier (Hon. W. A. Holman), and three wards each designed to hold 42 beds are now in course of construction. Additional wards will be built as rapidly as circumstances permit.

For some years past I have been advocating that in a mild climate such as we enjoy in Australia, open-air treatment should be resorted to as far as possible for all suitable cases such as tuberculosis, septic wounds, &c.

This

This, in my opinion, would not only tend to the more speedy recovery of patients and lessen the monotony and dreariness of long illnesses, but would also lead to a very considerable reduction in the cost of hospital construction. About three years ago this plan was tried at the Coast Hospital, two large verandahs being utilised as wards. These have proved of great value, and it is intended to largely incorporate the open-air treatment in the new Coast Hospital now in course of construction.

#### INFECTIOUS DISEASES.

A return of infectious diseases occurring in the different parts of the State will be found on page 57.

#### ESTABLISHMENT OF CONVALESCENT HOMES.

A convalescent home for men—Denistone House, Eastwood—was established in 1914; while a similar institution for women, the Strickland Convalescent Home, Rose Bay, was opened in December, 1914.

All persons are eligible for admission to these homes who are convalescent from serious illness, or whose health has been seriously impaired or weakened, and who are likely to be benefited by rest and change.

These institutions will be appreciated by those persons who, on discharge from the general hospitals after severe illnesses or operations, find a difficulty, either in their homes or elsewhere, of securing the rest and nursing attention which are essential for their restoration to full bodily strength. By provision of the convalescent homes, it is hoped also that the general hospitals will be relieved of many patients, who would otherwise require to remain longer in them, not only under less favourable conditions for convalescence, but also to the exclusion of other urgent cases awaiting admission. In this way a considerable saving should be effected by the convalescent homes, as it is estimated that the cost per bed will be about £35 as against upwards of £100 per bed in the general hospitals.

#### CARE OF INFANTS IN THE HOME.

For the guidance of parents, three pamphlets were drawn up and issued in 1914, by direction of the Minister of Public Health, containing advice to expectant mothers, and rules for the management and care of infants up to 1 and 2 years old.

#### ESTABLISHMENT OF A STATE HOSPITAL FOR SICK BABIES.

The Lady Edeline Hospital for Babies, which was opened by the Premier in November, 1913, has fully justified its establishment; and up to the end of 1914, over 230 children under the age of 2 years had been treated there.

Sick infants up to the age of 2 years are received for treatment. All infantile diseases peculiar to babies of this age are admitted, and special accommodation exists for the treatment of gastro-enteritis, pneumonia, and bronchial conditions.

The first annual report of this institution will be found on p. 141.

#### PRIVATE HOSPITALS ACT, 1908.

This is an important measure affecting the care of sick persons. Its purpose is to secure efficient central control over all private hospitals throughout the State, and to prevent any building being used as a hospital unless it is structurally suitable, adequately equipped, and in charge of properly qualified persons. In 1914 there were 139 registered private hospitals in the metropolis, and 380 in country districts. Inspections are made annually by a departmental medical officer.

PUBLIC



## PUBLIC LECTURES ON HEALTH MATTERS.

Steps will be taken at an early date with a view to arranging for the delivery of courses of lectures on health matters at different centres in the metropolis, and in suburban and country schools of art. These lectures will deal with household sanitation, ventilation, cleanliness, protection of food from flies and other household pests, the use of simple remedies for common complaints and injuries, &c. The course will include lectures by medical women on pre-maternity troubles, care of infants, &c. Delay has occurred in organising these lectures owing to absence at the war of a number of those who would have been required for the duty.

## COAST HOSPITAL.

From the report of the Acting Medical Superintendent, (Dr. Donald Wallace) on p. 110, it will be seen that the year has been a particularly busy one. There were 331 more admissions than in 1913, and the total number of cases under treatment during the year was 4,336, as against 4,041 in the previous year.

The epidemic of scarlet fever severely taxed the accommodation of the infectious diseases division, 628 cases being admitted, as against 287 in 1913; but there was very slight variation in the number of cases of typhoid fever and diphtheria treated in the two years, the number being respectively—Typhoid, 1913, 77; 1914, 73; diphtheria, 1913, 994; 1914, 977.

Antitoxin was administered to each of the 977 diphtheria patients treated at the hospital. In view of the prevailing diversity of opinion as to the dosage of antitoxin, Dr. Wallace has recorded the amounts used at the hospital.

During the year the horse ambulance service attached to the Coast Hospital was abolished, and all patients are now removed by the motor ambulances stationed at the ambulance and disinfection station at Woolloomooloo Bay.

Another departure is the installation of a small dairy herd to enable infant patients to be supplied with fresh milk. This will be extended as opportunity offers.

The Medical Superintendent (Dr. R. J. Millard), who, prior to the war, held the rank of major in the Army Medical Corps, was called upon for active service in August, and the duties of the position fell upon the second medical officer, Dr. Wallace, who has carried them out most assiduously and successfully.

## LEPROSY.

The twenty-fourth annual report on leprosy in New South Wales appears on p. 124. During 1914 four persons were found to be suffering from leprosy, and were admitted to the lazaret by warrant of the Board of Health, three of the patients being of European parentage, and the fourth a native of the South Sea Islands. There was one death during the year—a kanaka—admitted in 1904.

One hundred and thirty-four patients have been admitted to the lazaret since its establishment in 1883; and twenty-four persons remained under treatment on 31st December, 1914.

## STATE HOSPITALS AND ASYLUMS FOR THE INFIRM, EXCLUSIVE OF THE COAST HOSPITAL.

The number of persons dealt with in the State hospitals and asylums during the year 1914 totalled 12,715—10,724 males, 1,991 females. In addition to these, there were a considerable number given food and shelter for a few days. These latter are regarded as casual cases, and no formal entry of their admission or discharge is noted.

The number dealt with compared with the previous year shows an increase of 457.

The

The admissions for the year totalled 9,425 (8,155 males, 1,270 females), and the discharges and deaths numbered 9,197 (8,165 discharges and 1,032 deaths).

Five hundred and eighty (580) persons were brought from country districts; of this number, 320 were inmates of one or other of the hospitals throughout the State.

The average daily number in residence was 3,533.

The total number in the institutions on 31st December, 1914, was 3,518, as against 3,290 on the 31st December, 1913, an increase of 228. The patients in the hospital divisions totalled 1,627, an increase of 86 on the previous year's numbers.

The average mortality was 8.11 per cent.

The good work performed by the honorary visiting medical and surgical officers in previous years was continued during 1914, and the Department tenders its best thanks to those gentlemen who have so generously devoted their time, energy, and skill in affording comfort and relief to suffering and distressed humanity.

Since the appointment of honorary visiting physicians and surgeons, the establishment of specialised hospital divisions, and the fitting up of operating theatres at the various institutions, their character as homes for the aged and indigent has changed distinctly to hospitals for the sick. Many acute cases, which formerly it would have been necessary to send to one or other of the metropolitan hospitals, now receive, locally, treatment according to the most modern methods. Patients are thus saved the necessity of undertaking a tiring and sometimes rough journey with its attendant risks.

The number of patients in the hospital divisions on 31st December last (1,627) represents the high-water mark in hospital numbers. Even in the year when the population of the institutions was nearly 300 in excess of last year's numbers, the hospital patients were considerably less than the total mentioned.

Particulars of the work done at the institutions are shown in the reports of the various Medical Superintendents.

Expenditure for 1914 totalled £90,489, an increase of £4,648 on the previous year. This increase is due mainly to providing for the extra daily number in residence.

The average cost per head for the year was £25 12s. 3d.

The revenue collections amounted to £9,830, the major portion of which represents payments by the Commonwealth Government for the maintenance of men and women who forfeited their pensions and sought the shelter of State institutions.

*Farm and Garden operations.*—103,677 gallons of milk were yielded by the dairy herds at Rookwood and Newington, the year's operations showing a credit of £907.

The value of pigs sold totalled £1,770; 273,140 lb. of vegetables were obtained from the vegetable gardens, and in addition a considerable quantity of fruit and over 4 tons of green fodder were produced at the Waterfall Sanatorium.

Three thousand six hundred and twenty-one dozen eggs were obtained from the poultry yards; and from the bakeries at Macquarie-street, Parramatta, and Liverpool, 998,000 lb. bread, 60,000 lb. cakes, and nearly 600 dozen buns were turned out.

#### WAR SERVICE.

The Department under my control is naturally one upon which the war makes very full demands. Several of my principal medical officers were members of the Army Medical Corps, and were called up on

active



active service immediately after the declaration of war, amongst these being Drs. R. J. Millard (Medical Superintendent of the Coast Hospital), Dr. Robert Dick (Medical Officer of Health, Hunter River Combined District), and Dr. John Purdy (Medical Officer of Health, Metropolitan Combined District); Drs. T. M. Furber, T. J. Frizell, and J. A. James (all of the Coast Hospital Staff), also left for active service during the early months of the war. Miss E. J. Gould, President of the Army Nursing Service, was also required to take up duty on behalf of the military authorities in August, and before the end of the year twenty members of the staff were absent on active service.

Regular visits of inspection were paid by the Health Medical Officers of the Department for the purpose of advising the military authorities in connection with matters of sanitation, disposal of food wastes, &c., at the various camps.

Examinations were also made by the Pure Food Inspectors of stores, &c., supplied to transports, and numerous samples taken from time to time were tested by the Government Analyst. Meat supplies, particularly canned and tinned meats, were examined and reported upon by the departmental officer in charge of meat export.

Before military hospitals were established all cases of infectious fevers, venereal diseases, &c., occurring among the military were treated at the Coast or other hospitals under my control; and considerable quantities of bedding, blankets, and military clothing from the various camps have been disinfected at the departmental disinfecting station at Woolloomooloo Bay.

A complete list of officers and nurses who have volunteered for active service will be published in the succeeding reports, but the following have enlisted for the year 1914:—

Name.	Date civil duty ceased.	Name.	Date civil duty ceased.
Mackay, William ...	12 August, 1914.	Walters, Cecil J. M. ...	23 Sept., 1914.
McBride, George ...	13 „ 1914.	Gould, Nurse E. J. ...	27 „ 1914.
Millard, Dr. R. J. ...	20 „ 1914.	Johnston, Nurse J. B. ...	27 „ 1914.
Tinman, John N. ...	24 „ 1914.	Budgen, Varney F. ...	30 „ 1914.
Purdy, Dr. John S. ...	28 „ 1914.	Bell, Randel C. ...	9 Nov., 1914.
Jones, William ...	29 „ 1914.	Cawood, Nurse D. G. ...	22 „ 1914.
Lauer, Cyril V. C ...	1 Sept., 1914	Dickson, Nurse C. M. ...	22 „ 1914.

#### DEATH OF SIR NORMAND MACLAURIN.

By the death of Sir Normand MacLaurin on 24th August, 1914, the Board of Health lost one of its most distinguished members, who had rendered conspicuous services to the community in many ways, not least among them being in connection with public health administration.

In the year 1881, when the first really severe epidemic of smallpox occurred in Sydney, the Government constituted the Board of Health and Sir Normand MacLaurin (then known as Dr. H. N. MacLaurin), was one of the original members of it. Dr. MacLaurin was appointed President of the Board of Health in 1886, and held that position until he resigned it to enter the Legislative Council as a colleague of the late Sir George Dibbs. He remained an active member of the Board of Health from its inception up to the time of his death.

#### HEAD OFFICE.

*Medical and Inspectorial Staff.*—The smallpox epidemic which continued throughout the year made heavy demands on various members of the medical and inspectorial staffs, visits having to be paid at all

all hours of the day and night to suspected cases in the metropolis, and a considerable amount of night travelling being entailed in connection with suspicious cases reported from the country.

On the declaration of war in August, further demands were made upon this staff, both for active service abroad and for home duty in connection with the medical and sanitary inspection of military camps and camp sites, food supplies, &c., and also in preparing anti-typhoid vaccine, and inoculating and vaccinating troops.

*Secretary.*—In May, considerable change was made in the personnel of my staff by the promotion to the position of Under-Secretary to the Chief Secretary's Department of Mr. G. H. King, who had with conspicuous ability filled the post of Secretary to the Board of Health from 1901. Mr. King was also appointed Under-Secretary to the newly-created Department of Public Health, so that the Department still benefits by his experienced advice.

Mr. T. H. Neely, Accountant in the Chief Secretary's Department, succeeded Mr. King as Secretary to the Board of Health, and has carried out the duties of his new position in a markedly able manner during an exceptionally busy and eventful period.

*Chief Clerk, Account and Record Branches.*—That the work of these branches was unusually heavy is shown by the increase in the number of papers dealt with in 1914, as compared with those of 1913, viz.:—

		Record Papers.	Vouchers.	Infectious Diseases Notifications.
1913	...	34,460	7,063	9,139=50,662
1914	...	39,243	10,000	11,422=60,675

I cannot speak too highly of the service rendered by all members of my staff during an exceptionally strenuous and trying year.

*Inadequate Accommodation for the Head Office Staff.*—I again desire to draw attention to the need for increased accommodation for the Head Office Staff. It is still necessary for the Board of Health to meet in a room loaned for the purpose at the Chief Secretary's Department, and the costly and inconvenient arrangement still perforce continues of renting adjacent premises for the housing of the Veterinary, Meat Export, and Sanitary Staffs. There is very urgent need for the additional accommodation, for which, as mentioned in my previous report, provision has been made on the Draft Estimates for several years past. I trust that at an early date Parliament will see its way to vote the comparatively small sum of money required for this very necessary work.

#### ASSISTANCE RENDERED BY OTHER DEPARTMENTS.

I again desire to tender my thanks to other branches of the Public Service, particularly to the Crown Law Department, to the Inspector-General of Police and his officers, and to the Director of Agriculture and his staff of dairy inspectors, for valuable assistance rendered throughout the year in various directions in connection with matters affecting the public health.

#### REPORTS ON BRANCHES.

A report by the Officer-in-charge of each Branch is appended hereto.

ROBT. PATON,  
Director-General of Public Health.

T. H. NEELY,  
Secretary.

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 PART I.
 

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## Public Health Administration.

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## PART I.

## Public Health Administration.

## CHEMICAL LABORATORY.

## REPORT OF GOVERNMENT ANALYST.

*Staff.*

Government Analyst: WILLIAM M. HAMLET, F.I.C., F.C.S., J.P., Member of the Society of Public Analysts (London).

Second Government Analyst: THOMAS COOKSEY, Ph.D. (Marburg), F.I.C.; B.Sc. (London).

Third Government Analyst: WILLIAM M. DOHERTY, F.I.C., F.C.S.

Assistant Government Analyst: S. G. WALTON, F.C.S.

Scientific Cadet: HAROLD B. TAYLOR, B.Sc.

Scientific Cadet: ARTHUR D. DIBLEY, A.T.C.

Shorthand-writer and Typist: GRACE MCGLYNN.

Attendants { F. M. Armer.  
V. Williams.

To the Director-General of Public Health.

Sir,

Herewith I have the honour to submit to you the Annual Report of the Chemical Laboratory for the year 1914.

The amount of work done shows a steady increase, the number of samples received and analysed totalling 12,438, being an increase of 1,596 samples over that of the year 1913.

The nature of the work done not only includes the samples analysed, but a large number of minutes on official papers involving chemical and expert knowledge, besides reports on subjects of varied interest and importance to the Government.

It also comprised my attendance at the meetings of the Advisory Committee under the "Pure Food Act, 1908," meetings of the Public Service Board Appointment Committees, and those also of the Sludge Abatement Board.

Considerable work was done for the Pure Food Advisory Committee in formulating and verifying the different regulations discussed in Committee. New standard methods of analysis have been considered in connection with the Commonwealth Conference held in Melbourne. This work includes the drawing up of standard official methods for the analysis of spices, essences, cordials, syrups, edible oils and fats, ice creams and ices, and disinfectants.

The fixing of standard methods for all the remaining regulations are entrusted to the Government Analysts of the other States and the Federal Analyst, who jointly take the responsibility of devising methods for the analysis of medicines, drugs, milk, cheese, butter, margarine, infants' and invalids' foods, dried fruits, colouring matter, dried milk, wine and beer.

This work of standardisation is still in progress, and it is hoped that an early opportunity will be afforded for discussing the subject at the proposed General Conference of Analysts from all the States and the Commonwealth Analyst.

Much of the work of the year required the personal attendance of myself and members of the Staff at the Supreme Court, Quarter Sessions, and Police and Coroners' Courts.

The nature of the work of the Laboratory is most varied in character, embracing not only the examination of foods, medicines and pharmaceutical preparations, but all kinds of Government stores and building materials, such as inks, disinfectants, lubricating and fuel oils, kerosene, tobacco, textile fabrics, soaps, paints, spirits, bituminous roofing, stone, &c.

At the request of the Minister for Public Health, an investigation was made into the ventilation of theatres and picture-shows, as a result of which it was found that while the audience is fairly well provided with fresh air, the performers and other persons behind the scenes are very badly catered for in this respect.

In addition to the usual Coroners' and Police inquiries (in which human and animal viscera were examined for poisons or noxious substances), a number of cases from the Finger-print and General Criminal Investigation Department of the Police came under my notice.

A new feature of work lately has been the analysis of food stores for the troops proceeding to the war—a work gladly undertaken in the true spirit of loyalty by my Staff.

The work of water analysis is quite as large as formerly, and demands one special officer who devotes his whole time to the analysis of:

Water for domestic purposes.

Water for use in locomotives and boilers.

Water for the Sludge Abatement Board, in connection with the pollution of rivers.

Tank effluents and filtrates from septic-tank installations.

Sewage and surface drainage.

The



The pollution of rivers by sludge and liquid refuse from the work of dredging, sluicing, and washing by individuals or mining companies, gives a certain amount of work which has lately been somewhat diminished owing to difficulties met with through defective legislation. The work of the Sludge Abatement Board is greatly hampered by the absurdly low standard of purity adopted, no action being permissible unless the water is polluted to the extent of 800 grains of solid matter per gallon, whereas a water showing half this quantity would be quite sufficient to pollute a river or watercourse so as to unfit it for drinking or for fish culture.

A very interesting case of the illegal use of quack medicines was in progress but not concluded at the end of the year.

Evidence was given in a case where a remedy labelled "Antipon," supposed to reduce obesity, was shown to be composed of a solution of citric acid.

A preparation of banana fruit placed on the market and called "Banana Flour" was found to be mixed with half its weight of maize starch.

Modern scientific names are deliberately used for advertising purposes. A mixture of kerosene and nitro-benzene, submitted for analysis, was labelled "Radium Spray."

Many substitutes for cream of tartar have lately come on the market as a direct consequence of the war, but in most cases, where, for instance, the acid principle has been phosphoric acid, no objection could be reasonably raised.

In conclusion, I have the pleasing duty to favourably commend my Staff, both professional and general. The whole of the work of this Branch is carried on by no more than nine persons—a smaller staff than exists in any similar Government institution in the Commonwealth. This is probably the most economically worked laboratory in Australia. Every member of the Staff has worked diligently and effectively, with the result that it has been possible to accomplish a large amount of work at the minimum expenditure.

WILLIAM M. HAMLET,  
Government Analyst.

TABLE 1.

SAMPLES examined in the Government Chemical Laboratory during the year 1914, for the purposes of the Pure Food Act, 1908.

Nature of Sample.	Authority.	Number of Samples.	Number of Adulterated Samples.
Baking Powder.....	Food Inspectors .....	18	.....
Banana Flour .....	" .....	1	1
Biscuits .....	" .....	3	.....
Breakfast Food .....	" .....	1	.....
Butter .....	" .....	52	.....
Chutney .....	" .....	2	.....
Cocoa and Chocolate .....	" .....	34	10
Coffee .....	" .....	30	8
Condensed Milk .....	" .....	19	5
Confectionery .....	" .....	17	.....
Cordia's, Summer Drinks, &c. ....	" .....	107	46
Corn Flour .....	" .....	1	.....
Cream .....	" .....	2	.....
Cream of Tartar .....	" .....	3	.....
Drugs, Medicines, Pills, &c. ....	" .....	115	32
Edible Oils .....	" .....	5	3
Egg and Custard Powders .....	" .....	9	3
Essences .....	" .....	26	9
Fish (Tinned and Smoked) .....	" .....	7	3
Flour .....	" .....	4	.....
Ginger .....	" .....	11	.....
Honey .....	" .....	7	.....
Ice Cream .....	" .....	25	7
Icing Sugar .....	" .....	1	.....
Infants' and Invalids' Foods .....	" .....	16	.....
Jam .....	" .....	17	1
Margarine .....	" .....	5	4
Meat and Meat Products .....	" .....	20	4
Milk—Metropolitan District .....	" .....	3,344	219
" .....	Municipalities .....	4,659	160
Country Districts .....	Food Inspectors .....	823	120
" .....	Municipalities .....	800	27
Mustard .....	Food Inspectors .....	2	.....
Pepper .....	" .....	13	.....
Sauce .....	" .....	15	3
Soap .....	" .....	81	15
Spice .....	" .....	1	.....
Spirits .....	" .....	52	6
" .....	Licensing Inspectors..	738	30
Vegetables (Preserved) .....	Food Inspectors .....	2	.....
Vinegar .....	" .....	34	6
Total .....		11,122	722

TABLE 2.

SAMPLES examined in the Government Chemical Laboratory during the year 1914, in connection with the Public Services of the State.

Authority.	Nature of Sample.	No. of Samples.
Police and Justice Departments .....	Noxious drugs.....	10
"          "          .....	Criminal investigations .....	41
"          "          .....	Opium.....	3
"          "          .....	Human Viscera.....	30
"          "          .....	Animal Viscera .....	5
Public Works Department, and Municipal Authorities, &c. ....	Sewages and Effluents .....	167
"          "          "          .....	Waters .....	342
State Hospitals and Subsidised Charities .....	Bread .....	19
"          "          .....	Condensed Milk .....	1
"          "          .....	Milk.....	38
"          "          .....	Spirits .....	6
"          "          .....	Sugar.....	1
"          "          .....	Vinegar.....	2
Stores Supply Department (for the Public Service) ...	Beeswax .....	33
"          "          "          .....	Benzene and Petrol .....	15
"          "          "          .....	Bread .....	3
"          "          "          .....	Chicory .....	5
"          "          "          .....	Disinfectants .....	60
"          "          "          .....	Ink .....	9
"          "          "          .....	Kerosene .....	6
"          "          "          .....	Lubricants .....	130
"          "          "          .....	Paint.....	12
"          "          "          .....	Radium Spray .....	1
"          "          "          .....	Rubber .....	2
"          "          "          .....	Soap .....	202
"          "          "          .....	Sulphur .....	2
"          "          "          .....	Sulphate of Copper .....	2
"          "          "          .....	Textile Fabrics .....	75
"          "          "          .....	Tobacco .....	2
Various authorities .....	Air.....	29
"          .....	Bituminous Roofing .....	4
"          .....	Coal .....	3
"          .....	Medicine .....	4
"          .....	Paints and Varnishes .....	11
"          .....	Condensed Milk .....	4
"          .....	Malt Extract .....	2
"          .....	Miscellaneous (including Human Milk, Stone, Sand, Tinned Meats, Wine, &c., &c.) .....	35
Total .....		1,316

## PURE FOOD ACT, 1908.

REPORT by the Chief Food Inspector on the general administration of the Pure Food Act, 1908, during the year ended 31st December, 1914.

*Staff :—*

*Chief Inspector :—*A. KENCH.

*Country Inspectors :—*C. V. FRANCIS, G. A. GRIFFEN, W. H. EILBECK.

*Metropolitan Inspectors :—*J. WILLIAMS, ROBERT HORNE, A. PATTON, W. ALLISON.

*Clerk :—*C. G. LONGWORTH.

I HAVE the honour to submit herewith a report of the work performed under my supervision for the year ended 31st December, 1914.

The staff of the Pure Food Branch has had a busy year, and a large amount of useful work has been performed throughout the whole of the State.

A special feature of the year's work is the regular and systematic inspection of premises used in connection with the preparation, storage, and packing of foods and drugs for sale, including butchers' shops, bakeries, jam factories, ice-cream factories, small-goods factories, fish shops, condiment factories, manufacturing confectioners, milk-vendors' shops, restaurants and dining-rooms, fruit shops, general stores, retail and wholesale, and many wholesale bulk stores and distributing depôts.

*Milk Supply.*—Special attention has been paid to the milk supply, both in the Metropolitan district and country towns. Many samples of milk have been procured and submitted to the Government Analyst for testing. Milk-carts and milk-vendors' premises have received close scrutiny, and many defects which were likely to result in contamination of the milk have been remedied. Many old rusty milk-cans with jagged edges and other faults have been condemned as unsuitable.

### *Samples of Milk.*

Samples of Milk taken by—	Locality.		Total.	Found Adulterated.	Warnings issued.	Prosecutions.	Fines and Costs, recovered.
	Met. Dist.	Country.					
Pure Food Staff.....	3,220	760	3,980	291	102	189	£ s. d. 837 11 0
Local Authorities.....	4,644	902	5,546	174	98	76	296 11 0
	7,864	1,662	9,526	465	200	265	1,134 2 0

Several warnings have been issued to and prosecutions undertaken against milk-vendors for exposing milk to contamination.

The unsatisfactory methods of certain milk distributing firms in depositing milk-cans unprotected on public highways has received special attention, and a regulation has been framed which should stop this undesirable practice.

*Milk standard.*—9,526 samples of milk have been procured and analysed. These samples comprise the product of mixed dairy herds, and iced milk from vendors and dairymen, obtained under all conditions and at various times. Of the 9,426 samples, 9,061 were found to be well above the required standard, while 465 samples, or 4·93 per cent were below. In 265 cases prosecutions were instituted, and in the other 200 warnings were issued.

### *Preparation and Storage of Meat.*

*Butchers' shops.*—During the year special attention has been given to butchers' shops and premises used in connection with the preparation of meat for sale, particularly as regards provision for protection from contamination by flies and dust, drainage, cleanliness of interior walls, utensils and appliances.

*Number of inspections.*—694 inspections have been made, 23 prosecutions instituted for unclean premises, resulting in traders being fined £97 17s., and many notices to effect improvements have been served on traders.

### *Restaurants and Refreshment Rooms.*

Regular inspections of restaurants and dining-rooms have been made, including a close examination of all food stuffs in course of preparation for human consumption.

*Number of inspections.*—634 inspections have been made, and it was found necessary to prosecute 40 traders for unclean and unsatisfactory premises, resulting in the recovery of £187 15s. in fines and costs.

Special



Special attention has been given to the methods adopted for the preparation and storage of food, and many warnings and notices have been served requiring traders to carry out necessary works to secure freedom from contamination of all food prepared by them.

*Restaurant milk.*—Many traders have been fined for wilful adulteration of milk for use with porridge or for the addition to tea. In some cases it was found that the milk contained from 20 per cent. to 75 per cent. of added water.

#### *General Inspections.*

It is worthy of note that regular inspections have been made of all premises used in connection with the preparation of food; many prosecutions have been found necessary, and a large number of notices have been served requiring traders to carry out necessary work to prevent contamination of food.

Number of premises inspected...	...	...	...	3,953
Number of notices served	...	...	...	1,118
Number of prosecutions	...	...	...	152
Amount of fines and costs recovered	...	...	£638	15s. 6d.

#### *Seizure and Condemnation of Food Unfit for Human Consumption.*

A very useful work has been carried out in the inspection of bulk stores and retail establishments, particularly as regards stocks of food for sale. It was found necessary in many cases to take drastic action and to condemn and have destroyed large quantities of foodstuffs, which were found on careful examination totally unfit for human consumption. Particular attention is called to the following condemnations:—

Cereals, seized and destroyed	...	...	...	2 tons 5 cwt.
Chicory	..	..	..	28 bags.
Condensed milk	..	..	..	549 tins.
Confectionery	..	..	..	4½ tons.
Fish	..	..	..	1¼ tons.
Fish (tinned)	..	..	..	31,441 tins.
Fruit (dried)	..	..	..	53½ tons (riddled with insects).
Invalids' food	..	..	..	560 tins.
Jam	..	..	..	3,386 tins.
Macaroni	..	..	..	47 cases.
Meat	..	..	..	6½ tons.
Mushroom pulp	..	..	..	1½ tons.
Rabbits	..	..	..	1,800 carcasses.
Pickles and sauce	..	..	..	600 bottles.
Tea	..	..	..	1½ tons.
Vegetables	..	..	..	57½ tons.

In this important work special care is taken to see that no food is destroyed which could be safely used for human consumption. In connection with the large seizure of dried fruits, it was found that many traders were trading in old season fruit at very low prices. This fruit, on examination, was found to be riddled with insect life, grubby, and dirty. In some cases traders were hiding these defects by treatment, and foisting the damaged stuff on the public. In eight special cases legal proceedings were taken, and traders fined £104 6s. It is fair to assume that, prior to the passing of the Pure Food Act, this rubbish would have been sold to the public, and in many cases used in restaurants.

#### *Special Inspection of Military Stores on Transports.*

During the last four months of the year, special attention was given to a thorough inspection of foodstuffs on transports, and many samples were procured and submitted for analysis.

#### *Advertising and Sale of so-called Cure-alls and Remedies.*

Important work during the year has been performed in connection with this class of trade, which I regret to say is rampant in Sydney; but the action taken has had a good effect in checking it, and has led to a modification of this form of advertising.

A perusal of the facts and figures in connection with the year's operations will, I venture to think, prove that very useful work has been carried out, but much still requires to be done.

The officers of the Staff have at all times carried out their duties in an efficient manner, and great praise is due to them for their unsparing energy in their work.

ARTHUR KENCH,  
Chief Inspector.

SUMMARY OF WORK PERFORMED BY DEPARTMENTAL PURE FOOD INSPECTORS  
DURING THE YEAR ENDED 31st DECEMBER, 1914.

*Samples of Milk collected.*

Number of samples taken in all parts of the State .....	3,980
Number of samples below standard .....	291
Number of warnings issued .....	102
Number of prosecutions .....	189
Amount of fines and costs .....	£835 5s.

*Samples of Foods, other than Milk, collected.*

Number of samples taken in all parts of the State .....	734
Number of samples below standard .....	132
Number of warnings issued .....	69
Number of prosecutions .....	63
Amount of fines and costs .....	£216 18s.

*Number of premises inspected.*

Number of premises inspected in all parts of the State .....	3,953
Number of notices served .....	1,118
Number of prosecutions .....	152
Amount of fines and costs .....	£638 15s. 6d.

*General breaches of Pure Food Act.*

Number of breaches .....	71
Number of warnings issued .....	29
Number of prosecutions .....	42
Amount of fines and costs .....	£167 7s. 6d.

*Prosecutions in cases where food unfit for human consumption has been seized  
and destroyed.*

Number of prosecutions .....	8
Amount of fines and costs .....	£104 6s.

*Summary of Legal Proceedings for Breaches of the Pure Food Act.*

	Prosecutions.	Fines and Costs.
		£ s. d.
Adulterated milk .....	189	835 5 0
Adulterated food .....	71	321 4 0
Unclean premises .....	152	638 15 6
General breaches of Act and Regulations .....	42	167 7 6
Total .....	454	£1,962 12 0

COMPARATIVE Table, showing the number of Samples of Milk taken by Departmental Pure Food Inspectors and Municipal Inspectors in the Metropolitan and Country Districts during the year ended 31st December, 1914.

Metropolitan District.	No. of Samples taken by Departmental Pure Food Inspectors.					No. of Samples taken by Municipal Inspectors.				
	No. of Samples.	No. Adulterated.	No. of Warnings.	No. of Prosecutions.	Fines and Costs.	No. of Samples.	No. Adulterated.	No. of Warnings.	No. of Prosecutions.	Fines and Costs.
					£ s. d.					£ s. d.
Sydney .....	1,016	98	30	68	357 10 0	720	19	11	8	23 8 0
Alexandria .....	77	3	.....	3	24 18 0	34	1	1	.....	.....
Annandale .....	65	5	2	3	17 18 0	14	.....	.....	.....	.....
Ashfield .....	53	.....	.....	.....	.....	157	4	3	1	20 6 0
Auburn .....	12	4	3	1	5 6 0	89	4	2	2	6 12 0
Balmain .....	36	3	2	1	0 16 0	177	.....	.....	.....	.....
Bankstown .....	6	.....	.....	.....	.....	17	2	1	1	2 12 0
Bexley .....	27	1	.....	1	5 6 0	107	8	7	1	4 6 0
Botany .....	19	.....	.....	.....	5 6 0	44	2	.....	2	3 12 0
Burwood .....	28	.....	.....	.....	.....	51	1	1	.....	.....
Canterbury .....	37	.....	.....	.....	.....	100	2	2	.....	.....
Concord .....	7	.....	.....	.....	.....	66	.....	.....	.....	.....
Darlington .....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
Drummoyne .....	30	.....	.....	.....	.....	88	2	1	1	1 1 0
Enfield .....	20	.....	.....	.....	.....	7	.....	.....	.....	.....
Erskineville .....	35	2	.....	2	Pending.	60	1	1	.....	.....
Glebe .....	44	2	2	.....	.....	250	1	1	.....	.....
Granville .....	11	.....	.....	.....	.....	66	4	2	2	3 12 0
Hunter's Hill .....	20	1	1	.....	.....	5	.....	.....	.....	.....
Hurstville .....	17	2	1	1	5 6 0	55	6	3	3	6 13 0

COMPARATIVE Table, showing the number of Samples of Milk taken by Departmental Pure Food Inspectors and Municipal Inspectors in the Metropolitan and Country Districts—*continued*.

Metropolitan District.	No. of Samples taken by Departmental Pure Food Inspectors.					No. of Samples taken by Municipal Inspectors.				
	No. of Samples.	No. Adult-erated.	No. of Warnings.	No. of Prosecu-tions.	Fines and Costs.	No. of Samples.	No. Adult-erated.	No. of Warnings.	No. of Prosecu-tions.	Fines and Costs.
					£ s. d.					£ s. d.
Kogarah .....	5	3	.....	3	10 18 0	65	2	2	.....	.....
Lane Cove .....	79	11	6	5	26 10 0	25	1	.....	1	4 9 0
Leichhardt .....	32	.....	.....	.....	.....	27	1	1	.....	.....
Liverpool .....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manly .....	139	6	4	2	1 16 0	114	7	5	2	7 12 0
Marrickville .....	75	.....	.....	.....	.....	161	4	3	1	5 6 0
Mascot .....	28	3	.....	3	11 18 0	47	2	1	1	5 6 0
Mosman .....	126	6	1	5	16 0 0	14	.....	.....	.....	.....
Newtown .....	160	4	.....	4	10 10 0	301	8	5	3	9 18 0
North Sydney .....	118	6	4	2	5 12 0	438	18	7	11	55 12 0
Paddington .....	185	7	3	4	13 8 0	150	1	.....	1	5 6 0
Parramatta .....	14	3	1	2	7 12 0	126	4	1	3	7 18 0
Petersham .....	81	3	2	1	3 6 0	70	.....	.....	.....	.....
Prospect and Sherwood .....	.....	.....	.....	.....	.....	41	2	.....	2	5 10 0
Randwick .....	96	3	1	2	5 12 0	204	13	7	6	23 2 0
Redfern .....	95	2	1	1	3 6 0	396	12	9	3	5 17 0
Rockdale .....	24	2	.....	2	5 12 0	139	6	5	1	2 13 6
Ryde .....	27	1	1	.....	.....	33	3	2	1	3 6 0
St. Peters .....	16	.....	.....	.....	.....	17	.....	.....	.....	.....
Strathfield .....	5	.....	.....	.....	.....	13	1	1	.....	.....
Vaucluse .....	22	.....	.....	.....	.....	12	.....	.....	.....	.....
Waterloo .....	90	10	5	5	17 3 0	58	3	2	1	Pending.
Waverley .....	85	3	.....	3	16 18 0	13	.....	.....	2	.....
Willoughby .....	8	.....	.....	.....	.....	73	5	3	.....	8 14 0
Woollahra .....	99	4	1	3	17 4 0	.....	.....	.....	.....	.....
Slires.										
Hornsby .....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kuring-gai .....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warringah .....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total .....	3,220	199	71	128	555 11 0	4,644	150	90	60	£227 11 6

TABLE showing the number of Samples of Milk taken by Departmental Pure Food Inspectors in the Hunter River Combined District, during the year ended 31st December, 1914.

Hunter River Combined Sanitary District.	No. of Samples taken by Departmental Pure Food Inspectors.					No. of Samples taken by Municipal Inspectors.
	No. of Samples.	No Adult-erated.	No. of Warnings.	No. of Prosecu-tions.	Fines and Costs.	No. of Samples.
Municipalities.					£ s. d.	
Adamstown .....	.....	.....	.....	.....	.....	.....
Carrington .....	.....	.....	.....	.....	.....	.....
East Maitland .....	.....	.....	.....	.....	.....	.....
Greta .....	.....	.....	.....	.....	.....	.....
Hamilton .....	15	.....	.....	.....	.....	.....
Lambton .....	.....	.....	.....	.....	.....	.....
Merewether .....	.....	.....	.....	.....	.....	.....
Morpeth .....	.....	.....	.....	.....	.....	.....
Newcastle .....	65	17	4	13	38 6 0	.....
New Lambton .....	.....	.....	.....	.....	.....	.....
Plattsburg .....	.....	.....	.....	.....	.....	.....
Raymond Terrace .....	.....	.....	.....	.....	.....	.....
Singleton .....	.....	.....	.....	.....	.....	12
Stockton .....	9	1	.....	1	2 6 0	.....
Wallsend .....	.....	.....	.....	.....	.....	.....
Waratah .....	.....	.....	.....	.....	.....	.....
West Maitland .....	33	2	1	1	1 6 0	.....
Wickham .....	.....	.....	.....	.....	.....	.....
Shires.						
Bolwarra .....	.....	.....	.....	.....	.....	.....
Cessnock .....	15	1	1	.....	.....	.....
Lake Macquarie .....	.....	.....	.....	.....	.....	3
Port Stephens .....	8	1	.....	1	3 12 0	.....
Tarro .....	20	2	1	1	3 6 0	.....
Total .....	165	24	7	17	£48 16 0	15



COMPARATIVE Table showing the number of Samples of Milk taken in other Country Municipalities and Shires by Departmental Pure Food Inspectors and Municipal and Shire Inspectors during the year ended 31st December, 1914.

District.	No. of Samples taken by Departmental Pure Food Inspectors.					No. of Samples taken by Municipal and Shire Council Inspectors.				
	No. of Samples.	No. Adulterated.	No. of Warnings.	No. of Prosecutions.	Fines and Costs.	No. of Samples.	No. Adulterated.	No. of Warnings.	No. of Prosecutions.	Fines and Costs.
					£ s. d.					£ s. d.
Albury .....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ballina .....	5	3	.....	3	24 18 0	3	.....	.....	.....	.....
Bathurst .....	.....	.....	.....	.....	.....	48	6	1	5	14 4 0
Bingara .....	2	2	.....	2	10 13 0	.....	.....	.....	.....	.....
Blayney .....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Braidwood .....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Camden .....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Casino .....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cobar .....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....
Cooma .....	6	3	1	2	6 12 0	2	.....	.....	.....	.....
Coonamble .....	6	.....	.....	.....	.....	17	.....	.....	.....	.....
Cootamundra .....	3	2	.....	2	4 12 0	.....	.....	.....	.....	.....
Corowa .....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cowra .....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dubbo .....	9	1	.....	1	6 6 0	.....	.....	.....	.....	.....
Dungog .....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glen Innes .....	.....	.....	.....	.....	.....	5	2	.....	2	4 12 0
Goulburn .....	20	.....	.....	.....	.....	164	2	2	.....	.....
Grafton .....	8	1	.....	1	7 16 0	24	.....	.....	.....	.....
Gundagai .....	3	2	.....	2	1 16 6	.....	.....	.....	.....	.....
Gunnedah .....	14	6	5	1	13 7 0	.....	.....	.....	.....	.....
Inverell .....	.....	.....	.....	.....	.....	22	.....	.....	.....	.....
Junee .....	9	1	1	.....	.....	.....	.....	.....	.....	.....
Katoomba .....	17	.....	.....	.....	.....	80	4	1	3	23 12 0
Kiama .....	11	3	3	.....	.....	.....	.....	.....	.....	.....
Lismore .....	17	.....	.....	.....	.....	104	.....	.....	.....	.....
Lithgow .....	15	2	1	1	10 16 6	95	2	2	.....	.....
Maclean .....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Moree .....	.....	.....	.....	.....	.....	13	1	1	.....	.....
Mullumbimby .....	1	.....	.....	.....	.....	2	1	.....	1	4 7 0
Murrumburrah .....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
Muiwillumbah .....	6	.....	.....	.....	.....	6	.....	.....	.....	.....
Muswellbrook .....	4	1	.....	1	1 16 0	4	.....	.....	.....	.....
Mittagong .....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Narrabri .....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Narrandera .....	1	1	.....	1	4 6 0	.....	.....	.....	.....	.....
Nowra .....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Orange .....	8	.....	.....	.....	.....	12	.....	.....	.....	.....
Parkes .....	5	.....	.....	.....	.....	10	.....	.....	.....	.....
Peak Hill .....	5	5	2	3	19 8 0	.....	.....	.....	.....	.....
Penrith .....	43	7	1	6	15 16 0	.....	.....	.....	.....	.....
Picton .....	4	1	1	.....	.....	.....	.....	.....	.....	.....
Queanbeyan .....	7	.....	.....	.....	.....	5	.....	.....	.....	.....
Quirindi .....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....
Richmond .....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Singleton .....	.....	.....	.....	.....	.....	12	.....	.....	.....	.....
Tamworth .....	52	2	2	.....	.....	.....	.....	.....	.....	.....
Temora .....	9	.....	.....	.....	.....	34	.....	.....	.....	.....
Tenterfield .....	6	.....	.....	.....	.....	5	.....	.....	.....	.....
Tumut .....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Uralla .....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wagga Wagga .....	31	1	.....	1	1 16 6	55	1	1	.....	.....
Wellington .....	18	1	.....	1	3 6 0	17	.....	.....	.....	.....
Windsor .....	12	2	.....	2	6 12 0	.....	.....	.....	.....	.....
Wollongong .....	18	4	2	2	8 14 0	.....	.....	.....	.....	.....
Wyalong .....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yass .....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Young .....	19	1	1	.....	.....	72	2	.....	2	4 4 0
Shires.										
Abercrombie .....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Blaxland .....	6	1	.....	1	5 16 6	.....	.....	.....	.....	.....
Blue Mountain .....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boree .....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bulli .....	28	3	2	1	6 6 0	65	3	.....	3	11 8 6
Byron .....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coolamon .....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Culcairn .....	3	1	1	.....	.....	.....	.....	.....	.....	.....
Erina .....	11	4	1	3	5 19 0	.....	.....	.....	.....	.....
Gilgandra .....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harwood .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lake Macquarie .....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Liverpool Plains .....	1	1	.....	1	10 16 6	.....	.....	.....	.....	.....
Manning .....	4	2	.....	2	6 14 0	.....	.....	.....	.....	.....
Sutherland .....	10	1	.....	1	4 6 0	.....	.....	.....	.....	.....
Tamarang .....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tweed .....	5	2	.....	2	21 12 0	.....	.....	.....	.....	.....
Waugoola .....	1	1	.....	1	20 16 6	.....	.....	.....	.....	.....
Woodburn .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total .....	581	68	24	44	230 18 0	902	24	8	16	£62 7 6

TABLE showing the Samples of Food, other than Milk, taken by Departmental Food Inspectors in all parts of State during the year ended 31st December, 1914.

Article.	No of Samples.	No. below Standard.	No. of Warnings.	No. of Prosecutions.	Amount of Fines and Costs.
					£ s. d.
Baking Powder .....	17	...	...	...	.....
Biscuits .....	3	...	...	...	.....
Bread .....	1	...	...	...	.....
Butter .....	57	1	...	1	3 6 0
Cocoa .....	6	...	...	...	.....
Cocoa Butter .....	4	...	...	...	.....
Coffee .....	30	5	2	3	6 18 0
Condensed Milk .....	23	...	...	...	.....
Confectionery .....	43	10	10	...	.....
Cordials and Aerated Waters .....	96	29	9	20	93 12 6
Cream .....	3	...	...	...	.....
Custard Powder .....	3	...	...	...	.....
Dripping .....	2	...	...	...	.....
Drugs .....	123	27	15	12	25 12 0
Edible Oils .....	6	3	1	2	3 2 0
Egg Substitutes .....	5	5	5	...	.....
Fish .....	7	...	...	...	.....
Flavouring Essences .....	20	14	13	1	2 6 0
Flour .....	7	...	...	...	.....
Fruit .....	1	...	...	...	.....
Ginger (Ground) .....	1	...	...	...	.....
Honey .....	7	...	...	...	.....
Ice Cream .....	25	3	...	3	7 3 0
Iceing Sugar .....	1	...	...	...	.....
Jam .....	14	...	...	...	.....
Lard .....	3	...	...	...	.....
Margarine .....	5	4	4	...	.....
Meat .....	14	4	1	3	15 18 0
Milk Foods .....	4	...	...	...	.....
Mustard .....	2	1	1	..	.....
Pepper .....	13	...	...	...	.....
Sauce .....	16	2	2	...	.....
Soap .....	78	10	4	6	18 11 6
Soup .....	1	...	...	...	.....
Spice .....	1	...	...	...	.....
Vegetables .....	2	...	...	...	.....
Vinegar and Vinegar Sub. ...	36	8	2	6	12 13 0
Wheat-meal .....	1	...	...	...	.....
Wines and Spirits .....	44	6	...	6	27 16 0
Total .....	734	132	69	63	£216 18 0

LIST of Municipal and Shire Councils, with officers authorised as Pure Food Inspectors, from whom samples were received during the year ended 31st December, 1914.

## Metropolitan Municipalities—

Darlington.  
Dundas.  
Lidcombe.  
Liverpool.

## Hunter River District—

Adamstown.  
Carrington.  
East Maitland.  
Hamilton.  
Mercwether.  
Newcastle.  
New Lambton.  
Plattsburg.  
Raymond Terrace.  
Wallsend.  
West Maitland.  
Waratah.  
Wickham.  
Stockton.

## Country Municipalities—

Albury.  
Armidale.  
Balranald.  
Bega.  
Berry.  
Blayney.  
Bourke.  
Bowral.  
Braidwood.  
Brewarrina.  
Campbelltown.  
Coraki.  
Corowa.  
Cootamundra.  
Cowra.

## Country Municipalities—continued.

Cudgegong.  
Deniliquin.  
Dubbo.  
East Orange.  
Forbes.  
Gunnedah.  
Hay.  
Hillgrove.  
Kempsey.  
Maclean.  
Manilla.  
Moss Vale.  
Mudgee.  
Murrumburrah.  
Narrabri.  
Narrandera.  
Nyngan.  
Penrith.  
South Grafton.  
St. Mary's.  
Tamworth.  
Umarra.  
Warren.  
Wilcannia.  
Windsor.  
Wollongong.  
Yass.

## Country Shires—

Berrigan.  
Blaxland.  
Blue Mountain.  
Coolamon.  
Erina.  
Harwood.  
Tweed.  
Wingadoc.



TABLE showing the Inspections made during the year ended 31st December, 1914, by the Departmental Pure Food Inspectors of Premises used for the preparation, storage, or sale of Food in the Metropolitan District.

Metropolitan District.	Baker and Pastrycook.	Butcher.	Confectioner.	Cereal and Acridated Water Factory.	Dairy.	Dairy produce.	Fish and Oyster.	Fruit and Green- grocer.	Grocer.	Hotel.	Jam and Sauce Factories.	Margarine Factory.	Milk Vendor.	Refreshment and Restaurant.	Slaughter-house.	Small goods.	Stores.	Various.	Notices served.	Prescriptions.	Amount of Fines and Costs.	Total
Municipalities—																					£ s. d.	
Sydney .....	19	14	41	5	6	60	95	74	2	1	...	12	305	...	47	9	...	215	25	127	0 0	725
Alexandria .....	...	4	15	...	6	...	4	18	24	...	...	...	...	5	...	4	2	...	12	1	5 6 0	80
Amundale .....	...	10	5	...	...	...	8	18	18	...	2	...	1	5	...	7	...	17	3	7 8 0	69	
Asquith .....	5	9	4	...	...	...	2	16	12	...	...	...	...	4	...	14	...	14	...	...	...	67
Auburn .....	...	2	1	...	...	...	...	4	...	...	...	...	...	2	...	4	...	4	...	...	...	13
Bahraim .....	9	10	13	...	...	...	10	25	17	...	...	...	...	6	...	10	2	...	37	3	23 18 0	102
Banksstown .....	...	1	2	...	...	...	...	5	...	...	...	...	...	1	...	...	...	...	2	1	5 6 0	9
Burwood .....	5	13	1	...	...	...	4	6	7	...	...	...	...	1	...	6	...	...	12	1	7 6 0	43
Canterbury .....	6	12	19	...	...	3	4	6	9	...	1	...	...	1	...	7	...	...	6	...	...	68
Concord .....	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	5
Darlington .....	1	1	3	...	...	...	2	3	3	...	1	...	...	...	...	2	...	...	3	...	...	16
Drummoyno .....	...	7	3	...	...	...	1	3	...	...	...	...	...	...	...	2	...	...	2	...	...	16
Enfield .....	...	4	...	...	9	...	...	1	2	...	...	...	...	...	...	...	...	...	1	1	3 6 0	16
Erskineville .....	...	3	...	...	...	...	...	3	16	...	1	...	...	...	...	...	...	...	5	1	2 6 0	23
Glebe .....	4	8	4	...	...	...	4	17	7	...	5	...	2	5	...	4	...	14	...	...	...	62
Granville .....	3	3	...	...	...	...	4	...	...	...	5	...	...	...	...	2	1	...	8	...	...	13
Hunter's Hill .....	1	2	1	...	...	...	...	4	3	...	...	...	...	2	...	1	...	...	3	...	...	12
Hurstville .....	7	11	12	...	1	...	4	5	9	...	...	...	...	2	...	4	3	...	10	2	5 12 0	58
Kogarah .....	3	6	7	...	...	...	2	...	5	...	...	...	...	4	...	...	...	...	9	...	...	27
Lane Cove .....	3	4	4	...	...	...	1	7	6	...	1	...	...	1	...	2	...	...	9	...	...	27
Leichhardt .....	5	14	10	...	...	...	8	18	6	...	...	2	...	1	...	...	7	1	23	1	1 0 0	83
Liverpool .....	...	...	...	...	...	...	1	4	1	...	...	...	11	...	...	2	...	...	15	...	...	19
Manly .....	3	8	1	...	...	...	2	2	6	...	...	...	...	8	...	3	...	...	8	3	15 18 0	33
Marriekville .....	4	12	6	...	...	...	2	11	15	1	2	1	...	2	...	6	...	...	12	2	7 6 0	62
Mascot .....	...	5	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
Mosman .....	...	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	3	...	...	3
Newtown .....	8	12	9	...	...	...	9	24	30	...	6	...	...	5	...	15	...	1	30	...	...	119
North Sydney .....	3	22	6	...	...	...	3	15	17	...	...	...	...	4	...	9	...	...	17	1	2 6 0	79
Paddington .....	...	11	5	...	2	...	2	16	4	...	1	...	...	8	...	3	...	...	24	3	7 18 0	52
Parramatta .....	6	11	...	...	...	...	3	1	...	...	...	...	...	...	...	...	...	...	7	...	...	21
Petersham .....	8	10	8	...	...	...	5	14	15	...	4	...	...	4	...	...	...	...	18	1	2 16 0	69
Randwick .....	2	9	14	...	...	...	1	6	14	...	1	...	...	2	...	5	...	...	6	...	...	54
Redfern .....	1	4	20	...	...	...	2	18	11	...	...	...	...	2	...	5	...	...	4	1	3 6 0	63
Rockdale .....	2	7	12	...	...	...	4	7	8	...	...	...	...	1	1	...	4	...	16	...	...	46
Ryde .....	1	3	1	...	...	...	...	2	7	...	...	...	...	...	...	...	...	...	7	...	...	14
Smithfield and Fairfield .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
St. Peters .....	...	3	...	1	...	...	...	...	...	...	2	...	...	...	...	2	...	1	3	...	...	13
Strathfield .....	2	11	1	...	...	...	1	1	...	...	...	2	...	...	...	1	...	...	7	1	10 6 0	16
Vaucluse .....	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	10
Waterloo .....	...	4	...	...	...	...	3	3	10	...	3	...	...	2	...	5	1	...	17	3	12 8 0	36
Waverley .....	8	17	2	...	...	...	10	17	8	...	...	...	...	9	...	13	...	...	17	2	8 16 0	84
Willoughby .....	...	2	2	...	...	...	...	2	6	2	...	...	...	...	...	2	...	...	5	1	6 6 0	16
Woollahra .....	2	8	8	...	...	...	7	3	4	...	...	...	1	9	...	3	...	...	11	1	3 6 0	45
Shires—																						
Hornsby .....	2	5	...	...	1	...	...	...	...	...	...	...	...	1	...	1	...	...	4	1	5 6 0	10
Kuring-gai .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
	133	343	245	6	17	11	175	385	390	6	29	3	27	399	1	188	32	8	642	59	£274 12 0	2,398

TABLE showing the Inspections made during the year ended 31st December, 1914, by the Departmental Pure Food Inspectors of Premises used for the preparation, storage, or sale of Food in Country Districts.

Country Districts.	Baker and Pastrycook.	Butcher.	Confectioner.	Cordial and Aerated Water Factory.	Dairy.	Dairy produce.	Fish and Oyster.	Fruit and Green-grocer.	Grocer.	Hotel.	Jam and Sauce Factories.	Margarine Factory.	Milk Vendor.	Refreshment Restaurant.	Slaughter-house.	Smallgoods.	Stores.	Various.	Notices served.	Prosecutions.	Amount of Fines and Costs.	Total.	
Municipalities—																						£ s. d.	
Albury .....	...	2	...	...	3	...	...	...	...	1	...	...	...	1	...	...	...	...	...	4	2	6 14 0	4
Armidale .....	4	5	...	...	3	...	...	...	...	...	...	...	...	2	...	...	...	...	1	1	1 17 0	12	
Ballina .....	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	
Barraba .....	6	4	1	...	2	...	2	...	...	4	...	...	...	4	...	...	5	...	2	1	5 19 6	28	
Bingara .....	3	2	...	...	1	...	...	...	...	...	...	...	...	1	...	...	6	...	3	...	...	13	
Blayney .....	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	4	...	1	...	...	...	6	
Braidwood .....	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	2	2 13 0	2	2	
Carcoar .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	4 7 0	1	1	
Casino .....	5	4	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	1	1 6 0	11	11	
Cooma .....	4	4	1	...	...	...	...	...	...	...	...	...	...	...	...	14	...	6	...	...	...	25	
Coonamble .....	3	3	1	...	3	...	...	...	2	1	...	...	...	3	...	...	...	...	...	...	...	16	
Cootamundra .....	...	...	1	...	...	...	...	...	1	...	...	...	1	...	...	5	5	3	3	11 9 6	12	12	
Cowra .....	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	4	
Cowra .....	5	2	1	...	3	...	2	1	...	5	...	...	...	3	...	...	1	...	8	1	1 16 0	23	
Dubbo .....	12	5	1	...	2	...	1	1	1	...	...	...	...	7	...	...	...	13	7	14 14 0	30	30	
Dungog .....	1	2	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	5	
Glen Innes .....	10	11	1	...	...	...	2	...	2	...	...	...	...	10	...	...	9	...	8	3	14 8 6	43	
Goulburn .....	1	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	3	3	9 14 6	3	
Grafton .....	2	2	...	...	...	...	...	...	...	...	...	...	3	4	...	...	...	...	5	6	30 1 6	11	
Gulgong .....	6	3	...	4	...	...	...	...	...	...	...	...	3	...	...	7	...	5	...	...	...	23	
Gundagai .....	2	4	1	...	...	...	...	...	1	...	...	...	6	...	...	6	...	10	4	16 6 0	20	20	
Gunnedah .....	10	7	...	3	...	...	2	...	5	...	...	...	6	...	...	...	8	...	4	...	...	41	
Hay .....	4	2	...	...	...	...	1	...	...	...	...	...	3	...	...	...	...	1	1	4 6 0	13	13	
Hunter River Districts .....	36	65	3	...	2	6	16	4	1	2	3	...	...	17	2	4	16	2	74	10	66 0 0	179	
Junee .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	4 7 0	1	1	
Kiama .....	2	2	2	...	...	...	...	2	6	3	...	...	...	6	...	2	...	15	2	3 12 0	25	25	
Lismore .....	4	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	2	3 12 0	6	6	
Lithgow .....	5	9	2	...	1	...	3	7	...	...	...	...	9	...	...	4	...	12	...	...	...	40	
Mittagong .....	...	...	...	...	1	...	...	...	...	2	...	...	...	...	...	...	...	3	2	14 13 0	3	3	
Moss Vale .....	1	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	3	1	3 16 0	4	4	
Mudgee .....	4	6	...	2	...	...	...	...	...	10	...	...	...	2	...	...	...	5	1	5 16 0	26	26	
Murrumburrah .....	2	3	...	...	...	...	...	...	1	...	...	...	3	...	...	...	...	5	2	3 13 0	9	9	
Murwillumbah .....	...	1	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	4	...	...	...	5	
Muswellbrook .....	2	5	4	...	2	1	...	7	...	...	...	...	3	...	...	...	2	...	...	...	...	26	
Narrabri .....	5	4	3	...	...	...	...	1	6	...	...	...	5	...	...	...	...	5	2	5 2 0	26	26	
Narrandera .....	2	3	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	7	
Nowra .....	4	3	1	...	2	...	...	1	...	4	4	...	...	6	...	...	...	13	...	...	...	25	
Nyngan .....	3	6	...	1	...	...	...	1	...	...	...	...	...	...	...	2	...	1	1	2 16 0	13	13	
Orange .....	8	...	2	3	2	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	28	
Parke .....	5	4	...	1	...	...	...	5	8	...	...	...	...	5	...	...	...	...	7	...	...	28	

Inspections made by the Departmental Pure Food Inspectors—Country Districts—*continued*.

District.	Baker and Pastrycook.	Butcher.	Confectioner.	Cordial and Aerated Water Factory.	Dairy.	Dairy produce.	Fish and Oyster.	Fruit and Green- grocer.	Grocer.	Hotel.	Jam and Sauce Factories.	Margarine Factory.	Milk Vendor.	Refreshment and Restaurant.	Slaughter-house.	Small-goods.	Stores.	Various.	Noxious served.	Prosecutions.	Amount of Fines and Costs	Total.
<i>Municipalities—continued.</i>																						
Peak Hill .....	3	4	12	1	...	...	...	12	9	...	...	...	...	5	...	...	...	...	6	...	£ s. d.	20
Penrith .....	4	5	...	...	...	...	...	...	1	...	...	...	...	4	...	...	...	...	6	...	18	5
Pictou .....	1	1	...	1	...	...	...	...	...	3	...	...	...	...	...	...	...	...	4	...	14	9
Queanbeyan .....	12	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	14	9
Quirindi .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	14	9
Richmond .....	3	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	14	9
Tamworth .....	9	11	1	...	...	1	1	12	...	...	...	...	...	11	...	15	...	...	13	4	18 5 0	51
Temora .....	3	4	...	...	...	...	...	1	1	17	...	...	...	...	...	4	...	...	12	2	7 13 0	30
Tenterfield .....	4	5	...	12	...	...	...	1	1	5	...	...	...	6	...	1	...	...	8	...	25	25
Tumut .....	3	3	...	...	...	...	...	1	1	...	...	...	...	2	...	6	...	...	4	4	12 19 0	15
Uralla .....	12	12	1	1	...	...	...	...	...	...	...	...	...	2	...	6	...	...	3	...	20	20
Wallendbeen .....	1	1	...	...	...	...	1	...	...	2	...	...	...	2	...	6	...	...	2	...	7	7
Warren .....	2	3	4	1	...	...	...	...	...	...	...	...	...	2	...	4	...	...	3	...	20	20
Wellington .....	9	14	5	2	...	...	1	4	...	4	...	...	...	13	3	...	5	...	10	1	1 16 6	56
Windsor .....	12	4	...	2	...	...	...	...	1	...	...	...	...	...	...	1	...	...	2	1	4 6 0	10
Wellongong .....	5	4	11	1	...	...	...	12	...	6	...	...	...	...	...	1	...	...	15	2	6 2 0	36
Wyalong .....	3	3	...	1	...	...	...	...	...	...	...	...	...	...	...	3	...	...	6	2	4 6 0	13
Yass .....	2	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	9	9
Young .....	5	6	1	...	...	...	...	1	...	...	...	...	...	6	...	11	1	...	6	2	7 12 0	23
<i>Shires—</i>																						
Bannockburn .....	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Barraba .....	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	1	1
Blacktown .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Bland .....	12	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	4	4
Blaxland .....	7	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	16	16
Boree .....	5	5	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13	...	19	19
Bulli .....	7	12	8	...	...	...	1	12	10	...	...	...	...	15	...	5	1	...	12	1	74	74
Burrangong .....	1	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	...	...	1	...	8	8
Byron .....	4	...	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	...	6	4	11	11
Colo .....	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	10 6 0	6
Coolamon .....	4	8	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	5	1	2 16 6	32
Culcairn .....	12	4	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	...	1	...	12	12
Gadara .....	3	2	4	...	...	...	...	1	...	...	...	...	...	...	...	5	...	...	3	1	5 16 6	15
Gilgandra .....	3	4	12	1	...	...	...	2	...	...	...	...	...	2	...	...	...	...	3	...	14	14
Goobang .....	1	1	...	...	...	...	1	1	...	...	...	...	...	2	...	1	...	...	3	...	9	9
Goorangie .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
Guyra .....	3	4	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	10	10
Harwood .....	12	12	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	5	1	5 16 6	6
Illabo .....	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	2	2
Imlay .....	3	1	...	...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	3	...	10	10
Klarna .....	1	2	3	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	3	...	10	10
Liverpool Plains .....	1	2	...	...	...	...	...	1	1	...	...	...	...	...	...	1	...	...	4	...	6	6
Manning .....	2	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	5	...	5	5
Namoi .....	2	1	...	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	3	...	6	6
Narraburra .....	...	2	...	1	...	...	...	1	1	...	...	...	...	3	...	2	...	...	3	2	5 13 0	10
Nundle .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	7	7
Tamarang .....	12	12	...	...	...	...	...	...	...	3	...	...	...	2	...	3	...	...	2	2	7 13 0	12
Timbrell .....	12	12	1	...	...	...	...	...	...	3	...	...	...	...	...	7	1	...	3	1	4 13 0	16
Tintenbar .....	12	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	4	4
Turon .....	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
Twed .....	1	3	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	3	...	7	7
Walgett .....	1	2	...	...	...	...	...	...	...	2	...	...	...	2	...	...	...	...	3	...	9	9
Waugoola .....	12	1	...	12	...	...	...	...	1	...	...	...	...	...	...	...	...	...	6	...	1 0 0	7
Wingearlie .....	12	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	4	4
Woodburn .....	2	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	5	...	5	5
Total Country .....	292	351	72	59	11	17	25	52	79	120	3	...	2	235	9	19	197	11	476	93	364 3 6	1,515
Total Metropolitan .....	133	343	245	6	17	11	175	385	390	6	29	3	27	399	1	188	32	8	642	59	274 12 0	2,358
Grand Total .....	425	694	317	65	28	28	201	437	469	126	22	3	29	634	10	207	229	19	1,118	632	638 15 6	3,953

TABLE showing Foods seized and destroyed by Departmental Pure Food Inspectors during the year ended 31st December, 1914.

Goods.	Quantity.	Reason destroyed.	Prosecutions.	Amount of Fines and Costs.
Agar .....	1 cwt.	Deteriorated...	...	£ s. d.
Arrowroot .....	121 packets	"	...	...
Asparagus .....	23 tins	"	...	...
Baking Powder .....	14 tins	"	...	...
Butter .....	20 lb.	"	1	15 6 0
Cereals .....	2 tons 5 cwt.	"	...	...
Cheese .....	2 qrs. 9 lb.	"	...	...
Chicory .....	28 bags	"	...	...
Cocoa .....	45 tins	"	...	...
Cocoanut .....	4 qrs.	"	...	...
Coffee .....	32 tins	"	...	...
Condensed Milk .....	549 tins	"	...	...
Confectionery .....	4 tons 11 cwt.	"	...	...
Cornflour .....	314 packets	"	...	...
Curry Powder .....	98 tins	"	...	...
Custard Powder .....	456 packets	"	...	...
Fish (fresh and frozen) .....	1 ton 5 cwt. 3 qrs.	"	...	...
Fish (tinned) .....	31,441 tins	"	2	22 8 0
Flour .....	2 qrs. 23 lb.	"	...	...
Fruit (dried and preserved) .....	53 tons 8 cwt. 25 lb.	"	3	36 0 0
Fruit (fresh) .....	25 dozen	"	...	...
Herbs (dried) .....	399 packets	"	...	...



Table showing Foods seized—*continued*.

Goods.	Quantity.	Reason destroyed.	Prosecutions.	Amount of Fines and Costs.
				£ s. d.
Invalids' Food.....	560 tins .....	Deteriorated...	.....	.....
Jam .....	3,386 tins.....	" .....	.....	.....
Macaroni .....	47 cases.....	" .....	.....	.....
Meat .....	6 tons 13 cwt. 3 qrs.....	" .....	2	30 12 0
Mushroom Pulp .....	1 ton 13 cwt. 24 lb. ....	" .....	.....	.....
Mustard .....	15 tins.....	" .....	.....	.....
Oysters .....	6 bags.....	" .....	.....	.....
Pepper .....	16 lb. ....	" .....	.....	.....
Pickles .....	426 bottles .....	" .....	.....	.....
Potted Paste .....	916 jars .....	" .....	.....	.....
Rabbits .....	1,800 carcasses .....	" .....	.....	.....
Salt .....	2 cwt. 3 qrs. ....	" .....	.....	.....
Sauce.....	121 bottles.....	" .....	.....	.....
Soup .....	23 tins.....	" .....	.....	.....
Sugar.....	1 qr. 8 lb.....	" .....	.....	.....
Tea .....	1 ton 8 cwt. ....	" .....	.....	.....
Treacle .....	32 tins.....	" .....	.....	.....
Vegetables.....	57 tons 8 cwt. 1 qr.....	" .....	.....	.....
Vinegar.....	43 bottles .....	Prohibited .....	.....	.....
Total .....	.....	.....	8	£104 6 0

RETURN showing the work performed by Departmental Pure Food Inspectors under the "Pure Food Act, 1908," from 1st October, 1909, to 31st December, 1914:—

Year.	No. of Samples collected.	No. below Standard.	No. of Prosecutions.	Amount of Fines and Costs.	Year.	No. of Samples collected.	No. of Prosecutions.	No. of Samples collected.	Amount of Fines and Costs.
<i>Milk.</i>					<i>Food and Drugs.</i>				
				£ s. d.					£ s. d.
1909-10	2,155	279	158	860 5 7	1909-10	391	49	41	150 4 0
1911	1,963	248	132	829 9 6	1911	830	245	171	451 0 6
1912	2,990	436	210	1,124 4 0	1912	593	71	71	148 17 0
1913	3,519	322	144	709 17 0	1913	641	107	72	174 12 6
1914	3,980	291	189	837 11 0	1914	734	135	71	321 4 0
	14,607	1,576	833	£4,361 7 1		3,189	607	426	£1,245 18 0

Year.	No. of Inspections.	No. of Prosecutions.	Amount of Fine and Costs.	Year.	No. of Inspections.	No. of Prosecutions.	Amount of Fine and Costs.
<i>Premises Inspected.</i>				<i>General Breaches of Act and Regulations.</i>			
			£ s. d.				£ s. d.
1909-10	802	46	94 14 6	1909-10	47	36	63 9 0
1911	929	50	235 12 0	1911	67	26	57 11 0
1912	982	88	305 1 2	1912	72	60	114 8 6
1913	2,600	93	382 7 6	1913	65	40	127 0 6
1914	3,953	152	638 15 6	1914	71	42	167 7 6
	9,266	429	£1,656 10 8		322	204	£529 16 6

*Summary of Legal Proceedings taken.*

Year.	No. of Prosecutions.	Amount of Fine and Costs.
1 Oct., 1909-31 Dec., 1910	281	£ s. d. 1,163 13 1
1911	379	1,573 13 0
1912	429	1,693 10 8
1913	349	1,393 17 6
1914	454	1,964 18 0
Total .....	1,892	£7,794 12 3



## DAIRIES SUPERVISION ACT, 1901.

CATTLE SLAUGHTERING AND DISEASED ANIMALS AND MEAT  
ACT, 1902.

REPORT by the Chief Veterinary Inspector upon the work of the Veterinary Branch of the Department of Public Health for the year ended 31st December, 1914.

*General Work embraced and Division of Work.**Staff.*

C. J. VYNER, M.R.C.V.S.,	Chief Veterinary Inspector,	stationed at Sydney.
R. C. BELL, M.R.C.V.S.,	Assistant	„ „ „ „
T. V. Blomfield,	Assistant to Veterinary Inspectors,	stationed at Illawarra.
E. P. Foster,	Assistant to Veterinary Inspectors,	stationed at Hastings and Manning River.
A. Siddins,	Dairy Inspector,	stationed outside Metropolitan District.
W. A. Mackie	do	Lower Hunter District.
J. Yeo	do	Moss Vale District.
J. G. R. Bocking	do	Upper Hunter District.
J. S. Lyons	do	Clarence River District.
S. C. Flood	do	Richmond River District.
J. Lacey	do	Quirindi to Queensland Border.
R. R. A. Faunce	do	Tweed and Brunswick Districts.
W. G. Johnstone	do	Casino and Kyogle District.
F. J. Madden	do	Metropolitan District, relieving Veterinary Inspector Bell.
V. Nevell	do	Bega and Monaro District.
F. Page	do	Macleay and Nambucca Rivers District.

The Dairies Supervision Act has been in force since 1886, when the staff consisted of the Chief Veterinary Inspector to the Board of Health, and two lay Inspectors. The progress made in the dairying industry is indicated by the additional appointments made to the inspectorial staff from time to time. In 1905 the staff comprised a chief inspector and six lay inspectors. Since then additions have been made as indicated above, the staff now consisting of a chief veterinary and an assistant veterinary inspector, and fourteen dairy inspectors.

In 1901 the Act was consolidated with Part IX of the Public Health Act, 1896, as the Dairies Supervision Act, 1901.

As originally passed in 1886, the Act applied only to the Metropolitan Police District, but during the twenty-eight years which have since elapsed, it has been extended by proclamation to a large portion of the State, and at present the whole of the Eastern and Central Divisions—as defined for the purposes of the Crown Lands Acts—as well as most of the important inland dairying districts, have been brought under the operation of its provisions. Further extensions are made as they become necessary from time to time by reason of increased population. I have from time to time submitted proposed regulations to the Dairies Supervision Act, 1901, to enable the better working of that Act, by giving inspectors more power to enter on premises, to muster and inspect cattle, to compel certain structural improvements to be carried out, and the strict observance of sanitary conditions. Certain of these matters at the present time can only be recommended as desirable. The original Act gave no power to frame regulations of this nature, and it will be necessary to have amendments made to meet these requirements. An amending Bill has been prepared to overcome this difficulty, and draft regulations have been prepared in anticipation of this Bill becoming law.

The dairying districts have been divided so as to give, as far as possible, each Dairy Inspector an equal amount of work, but my staff is still too small numerically to carry out inspections at sufficiently frequent intervals.

The total number of registered dairy premises in the State is 19,400, and the dairy cattle in milk about 565,000. It is estimated that there are also 100,000 or more dry dairy cows on the various farms.

The work done by the staff during the year under review may be summarised as under :—

Miles travelled.	Premises inspected.	Cattle inspected.	Dairy cattle condemned for disease.				Total.
			Tuberculosis.	Actino-mycosis.	Cancer.	Other causes.	
72,209	13,011	437,034	904	253	124	4	1,285

The owner of a condemned animal is entitled, and as a rule avails himself of the right, to a post mortem examination. This is done either at the dairy farm, or at the nearest boiling-down works, by arrangement between the owner and the dairy inspector.

Included in the 904 cattle condemned for tuberculosis are 47 head which reacted to the tuberculin test; 135 head were subjected to the test, and 47 gave a positive reaction.

Dairy Inspectors are also authorised to act under the Cattle Slaughtering and Diseased Animals and Meat Act, 1902, and it is a part of their duty to inspect as frequently as possible all slaughtering premises within their districts, to insure that the premises are so constructed that they can be maintained in a sanitary condition, and that they are kept so. The inspectors submit reports on the efficiency of the local supervision, and where necessary make recommendations for improvements in structure, supervision, or management. During the year my staff inspected 645 slaughtering premises, and 6,965 beef cattle, of which 25 were condemned for disease.

Owing to the limited number of the inspecting staff, dairies and slaughter-houses can only be visited on an average of once in eighteen months, and in some districts less frequently than that. Between the visits of the Departmental inspectors the officers of the Local Authorities should make periodic inspections, as the Dairies Supervision Act and the Cattle Slaughtering and Diseased Animals and Meat Act require that a regular supervision of dairy and slaughtering premises shall be maintained by the Local Authority for the district in which such premises are situated. Within municipalities the inspecting officer is usually the sanitary inspector; outside municipalities the police take charge of these inspections. With a very few exceptions the greatest assistance is given by these municipal and police officers, who see that the improvements to dairy and slaughtering premises recommended by the departmental inspector are satisfactorily carried out, and that the premises are maintained in a cleanly condition. In fact, with such a small staff it would have been impossible to have brought premises up to their present comparatively high standard without the valuable aid of the municipal and police officers. I would like to point out, however, that if there is systematic neglect by a Local Authority between the visits of the departmental inspector—which, as before stated, may be as much as eighteen months apart in the larger districts—it is possible for a dairyman to milk a cow suffering from tuberculosis during the whole period of her lactation (9 or 10 months) when she may not only be yielding diseased milk, but also infecting other animals in the same herd. This is one of the special reasons why the inspections by the departmental officers should be more frequent. The Board's Inspector should visit dairying and slaughtering premises once, at least, every four or six months; but this will only be possible when I am provided with additional Inspectors, and new appointments are made from time to time to the staff, as the rapid increase in dairying demands.

It is the policy of the Board of Health to encourage suburban dairies, as it believes that it is most desirable to shorten as much as possible the time elapsing between the taking of the milk from the cow and its delivery to the consumer, but dairies in urban and suburban areas must be maintained under the strictest sanitary conditions. For this reason it has been found necessary during the year to recommend the cancellation of some registered suburban dairy premises. The results obtained have been that the dairymen in a good many instances have rebuilt their premises in accordance with designs approved by the Board of Health, and other traders have expressed their intention of taking similar action.

During the year police court proceedings were taken against traders as under :—

No. of Cases.	Acts under which Proceedings taken.	Dismissed.	With-drawn.	Fines.	Costs.
128	Pure Food Act, 1908 ... ..	4	3	£ s. d.	£ s. d.
19	Cattle Slaughtering and Diseased Animals and Meat Act, 1902. ... ..			188 10 0	78 13 11
6	Dairies Supervision Act, 1901 ... ..			29 10 0	19 16 11
				13 0 0	4 11 6
Total—153				231 0 0	103 12 0
				Total (£334 12 0)	

It will be seen that the fines and costs recovered would be sufficient to pay the salary of an additional Inspector.

Inspections of cattle are made at the Flemington Saleyards on Monday and Thursday of each week, and are regularly and carefully carried out. The figures for the year are :—

No. of Cattle yarded.	Number condemned by Inspector prior to sale.				
	Tuberculosis.	Actinomycosis.	Cancer.	Emaciation.	Total.
267,101	16	12	1	170	199



Cattle to the number of 1,492 were also marked with a broad arrow. These are animals which are regarded by the Inspector as "suspicious," perhaps in poor condition, but not so poor as to be classed as emaciated, or else in the early stages of tuberculosis, &c. Such cattle are taken to the Glebe Island abattoir, and slaughtered under special supervision and inspection.

*Royal Commission of Inquiry as to Food Supplies and Prices.*

*Milk.*—In 1913, Mr. T. R. Bavin was appointed to hold a Royal Commission of inquiry as to food supplies and prices in New South Wales. In regard to Mr. Bavin's summary of recommendations and findings (Part XIII) in the sectional report on the supply and distribution of milk, I have the honour to submit the following comments:—

1. The administration of the Dairies Supervision Act by a central authority would be satisfactory, provided the staff was increased in sufficient numbers to carry out the work. It is absolutely a duty of the Department of Public Health to supervise the production and distribution of foods.

2. With regard to the amendments to the Dairies Supervision Act proposed by Mr. Bavin, I would point out—

(a) That the Board of Health has power to cancel registration of premises which are on an unsuitable site (Regulation 19, Pure Food Act, 1908). It is considered that if a dairyman is convicted three times for neglect of ordinary sanitary conditions, either of his premises or in his person, or for retailing adulterated milk or cream, his registration should be cancelled.

(b) That prescribed diseases should be notified to the controlling authority is a very good suggestion; provided that upon notification Veterinary officers are available to visit holdings and inspect the stock suspected of being diseased. The diseases other than tuberculosis which should be prescribed are actinomycosis, mastitis, contagious pleuro-pneumonia, and cancer.

(c) Authority to apply the tuberculin test is urgently required, and has been included in proposed regulations.

(d) Authority to require dairymen to keep a register of their cattle and to assist inspectors in mustering is also required, and has been included in proposed regulations.

(e) Dairymen would not object to a minimum registration fee of 5s., increased according to the number of cattle kept.

(f) The controlling authority should have power over the methods and appliances used in the transport of milk from country districts.

6. Mr. Bavin points out, as I have previously done, that inspections by inspectors of the Board of Health are too infrequent. This can only be remedied by the appointment of additional inspectors, which I have asked for on several occasions.

7. Pasteurisation should only be carried out under Government supervision.

9. Respecting Mr. Bavin's remarks with regard to prosecution for "adulteration" where the evidence consists in selling milk with a deficiency in butter-fat; I would point out that the present interpretation of the word "adulterated" in the Pure Food Act, 1908, is very useful.

11. With regard to Mr. Bavin's suggestion that a system of milk-grading be introduced, I might mention that we have not sufficient staff to thoroughly carry out our present system of inspection, let alone a system of milk-grading.

*The Dairy Industry Bill.*

With reference to the Dairy Industry Bill drafted for the Department of Agriculture, I would like to point out that if it becomes law it will entirely supersede the present Dairies Supervision Act. Under the Bill as drafted, it would be necessary for every milk-room to be registered with the Department of Agriculture, in addition to registration with the Department of Public Health. It would be practically impossible to avoid conflict between the two departments, as inspection would be duplicated, and dairy farmers who are at present satisfied with the administration of the Dairies Supervision Act by the Board of Health would become dissatisfied with dual inspection.

In other respects the proposed Bill also tends to duplication of work, and encroaches on the Pure Food Act. For instance, there is included in it margarine, which cannot, by any stretch of the imagination, be considered a dairy product.

C. J. VYNER, M.R.C.V.S.,  
Chief Veterinary Inspector.



## MEAT EXPORT BRANCH.

REPORT FOR THE YEAR ENDING 31st DECEMBER, 1914.

*Staff.*

Veterinary Inspector-in-Charge of Meat Export—G. K. THORPE.

Assistant Veterinary Inspector—C. J. M. WALTERS.

Clerk—R. B. JOHNSTON.

Meat Inspectors employed under Commerce Act:—

A. E. Blackwell,	L. H. Nolan,
P. Bruce,	H. D. Norton,
W. J. Hendy,	R. H. Pape,
A. S. V. Lee,	J. T. Roper,
G. Leeder,	J. Scott,
T. McDonald,	H. Thompson.
A. Marshall,	

Suburban Slaughter-house and Bacon Factory Inspectors:—

W. Dineen,	A. Matthews,
J. Elliott,	O. O'Connor,
G. Jack,	A. H. Smith,
C. A. Johnston,	J. Talbot,
J. M. Madden,	T. Tancred,
G. R. McCredie,	S. C. Vidler.

The Staff of fourteen Inspectors at Glebe Island, under Mr. Chief Inspector Everett, also work under the supervision of this Branch.

Sir,

Sydney, 13th April, 1915.

I have the honor to submit a report covering the work of my Branch for the year ended 31st December, 1914. In my report for 1913 a review is given of the early history of meat inspection in this State, and the duties of the Meat Export Branch which was inaugurated in July, 1912.

Owing to the demands of the authorities in Europe and the United States of America, a high standard as regards the inspection and sanitary handling of meat exported is now required.

Unfortunately, the available staff has not been large enough to enable all requirements to be met, but considerable improvements have been effected.

With a view of improving the standard of sanitation and inspection of meat at premises where meat is prepared for export, the Comptroller-General of Customs authorised Mr. Cherry, Veterinary Officer to the High Commissioner's Office in London, and Mr. Kerr, the Veterinary Officer in charge of Meat Export in Queensland, to pay a visit to the works in this State and report on the same.

I accompanied these gentlemen, and all the premises appointed under the Commerce Act were inspected.

Mr. C. J. M. Walters, B.V.Sc., Sydney University, was appointed Assistant Veterinary Inspector in February.

In September, Mr. Walters obtained leave of absence for the period of the war and joined the Australian Expeditionary Forces.

Mr. L. Nolan, Meat Inspector, joined the Branch in April.

Mr. R. B. Johnston was appointed Clerk in July, in place of Mr. G. E. Griffin.

The Meat Export Trade since the outbreak of the war has been considerably handicapped by a shortage of steamers possessing refrigerated space to carry the meat away. As a consequence, the cold stores have been congested and unable to meet the requirements of the trade.

My Branch has been able to assist the Collector of Customs in the purchase of large quantities of canned meats intended to be used for military purposes.

During August I was required to give evidence before Mr. Justice Street sitting as a Royal Commission to report on the Meat Export Trade.

Mr. Inspector Talbot, in August, submitted to me specimens from a pig which showed lesions at post-mortem examination, closely resembling swine fever. The specimens were forwarded to the Chief Inspector of Stock, Department of Agriculture. Apart from occasional evidence of contagious pleuro-pneumonia among cattle, no other contagious diseases among animals slaughtered and inspected have been noticed.

During the year at Flemington Sale-yards, on two occasions, drafts of cattle which had been transported considerable distances by rail, showed symptoms which closely resembled railroad sickness as described by American writers.

The exportation of bacon has not appreciably increased. The bacon shipped has been in small lots for the Island trade.

*Ante-mortem*

*Ante-mortem inspection of Cattle at Flemington Sale-yards.*

A Veterinary Officer visits Flemington Sale-yards on each day of sale and inspects the cattle yarded. Animals found to be diseased and unfit for food are condemned and shot at the yards. Cattle slightly diseased, or suspected of being diseased or unfit for food, are marked with green paint and slaughtered under special supervision at Glebe Island Abattoir.

## SUMMARY of Inspection of Cattle at Flemington :—

Month.	Sales.	Cattle Inspected.	Condemned and shot at sale.				Marked as "suspects."	Shot at Flemington for Boiling-down purposes.
			Emaciation.	Actinomycosis.	Tuberculosis.	Cancer.		
January.....	8	25,215	3	1	.....	.....	121	} 271
February .....	7	15,590	10	.....	1	.....	67	
March .....	9	21,025	17	1	.....	.....	133	
April .....	8	22,589	47	2	.....	1	169	
May.....	8	24,073	26	.....	1	.....	223	
June .....	8	25,130	17	.....	.....	.....	126	
July .....	9	21,590	7	.....	1	.....	152	
August.....	9	19,469	1	.....	1	.....	80	
September.....	8	22,575	8	.....	2	.....	130	
October.....	8	25,308	7	.....	1	.....	92	
November.....	9	24,638	3	3	3	.....	95	
December .....	8	19,899	24	5	6	.....	104	
Total .....	99	267,101	170	12	16	1	1,492	

Summary of the post-mortem examination of "suspects" from Flemington Saleyards slaughtered under supervision at Glebe Island :—

No. Examined.	Totally Condemned.		Partially Condemned.		Passed for Food.
1,221	Tuberculosis.....	108	Actinomycosis .....	402	283
	Emaciation.....	140	Tuberculosis.....	136	
	Bruises.....	1	Injuries .....	54	
	Abscess .....	...	Abscess .....	23	
			Cancer.....	74	
1,221		249		689	283

The marked "suspects" (chiefly old cows in poor condition) not slaughtered under supervision at Glebe Island were purchased for boiling-down purposes and shot at Flemington before removal.

*Inspection of Food Carcases.*

At the Sydney Abattoir, Glebe Island, and (about) fifty-two country and suburban slaughtering premises where a system of inspection is maintained, 4,489,356 food carcases intended for export or for local use were inspected, and 31,553 totally condemned. The number of food carcases inspected during the year was 351,194 less than during 1913.

The total number of animals slaughtered in the State under inspection during 1914 was 4,489,356; and the number condemned (wholly or partially) 31,553, or 702 per cent.

RETURN showing Cattle Slaughtered under inspection of officers of the Board of Health for the year ended 31st December, 1914, and the number of carcases totally or partially condemned :—

(1) *At Sydney Abattoir.*

Animals.	No. Slaughtered.	Condemned.										Other Diseases.		
		Tuberculosis.		Actino- mycosis.		Lymphad- enitis.		Cancer.		Bruises.				Em- acia- ted.
		Totally.	Partially.	Totally.	Partially.	Totally.	Partially.	Totally.	Partially.	Totally.	Partially.	Totally.	Partially.	
Bulls .....	3,698	244	403	...	12	...	...	...	...	1	12	61	1	...
Bullocks .....	111,247	551	1,685	...	350	...	...	...	43	33	34	28	9	36
Calves .....	56,359	1	...	...	...	...	...	...	4	4	2	55	1,048	2
Cows .....	83,281	1,717	2,008	...	152	...	...	...	34	92	125	775	35	63
Pigs .....	65,566	726	2,001	...	1	...	...	...	...	...	25	2	59	29
Sheep.....	1,807,760	...	...	...	...	79	180	...	...	2	3	2	4	2

Percentage of cattle condemned for tuberculosis :—Totally, 1·26 per cent partially, 2·06 per cent.

Percentage of pigs condemned for tuberculosis :—Totally, 1·107 per cent. partially, 3·05 per cent

(2) *At about fifty-two Country and Suburban Private Slaughter-houses.*

Animals.	No. Slaughtered.	Condemned.											
		Tuberculosis.		Actino- mycosis		Lymphadenitis.		Cancer.		Bruises.		Emaci- ation.	Other Diseases.
		Totally.	Partially.	Totally.	Partially.	Totally.	Partially.	Totally.	Partially.	Totally.	Partially.	Totally.	Partially.
Bulls .....	514	35	9	...	...	...	...	...	...	...	...	5	12
Bullocks .....	112,813	871	1,899	10	516	...	...	...	9	45	54	12	19
Calves .....	6,343	10	1	...	...	...	...	...	...	1	...	15	20
Cows .....	46,856	789	616	1	56	...	...	...	2	38	45	113	21
Pigs .....	23,371	229	622	...	...	...	...	...	...	3	8	5	14
Sheep.....	2,067,403	...	...	...	...	3,094	1,471	13	...	797	63	1,383	439
Total .....	2,257,300	1,934	3,147	11	572	3,094	1,471	13	11	884	170	1,553	515

Percentage of cattle condemned for tuberculosis :—Totally, 1·05 per cent.; partially, 1·56 per cent.

Percentage of pigs condemned for tuberculosis :—Totally, ·97 per cent.; partially, 2·66 per cent.

(3) *At seven Country and Suburban Bacon Factories.*

Pigs killed, 104,545. Tuberculosis—Totally, 2,100; Partially, 2,980. Number Condemned :—Bruises—Totally, 5; partially, 19: Emaciation—Totally, 10. Other Diseases—Totally, 75; partially, 17.

Percentage of pigs condemned for tuberculosis :—Totally, 2·01 per cent.; partially, 2·86 per cent.

Pigs Slaughtered.	Condemned.						
	Tuberculosis.		Bruises.		Emaci- ation.	Other Diseases.	
	Totally.	Partially.	Totally.	Partially.	Totally.	Totally.	Partially.
104,545	2,100 per cent. 2·01	2,980 per cent. 2·86	5	19	10	75	17

TUBERCULOSIS.

The following shows the percentage of Animals totally or partially condemned for Tuberculosis at the time of slaughter :—

Animals.	No. Slaughtered.	Condemned for Tuberculosis.		Percentage condemned for Tuberculosis.		Percentage condemned for Tuberculosis.
		Totally.	Partially.	Totally.	Partially.	Totally or Partially.
Bulls .....	4,212	279	412	per cent. 6·62	per cent. 9·78	per cent. 16·40
Bullocks .....	224,060	1,422	3,584	·63	1·6	2·23
Calves .....	62,702	11	1	·01	·001	·011
Cows .....	130,137	2,506	2,624	1·92	2·01	3·93
Pigs .....	193,082	3,055	5,603	1·58	2·9	4·48

The above figures reveal that the percentage of bulls showing tubercular lesions on post-mortem examination is considerable.

The prevention of human tuberculosis of bovine origin can hardly be separated from the prevention of tuberculosis in bovine animals themselves, and it would appear that the uncastrated bovine animal may play an important part in the spread of bovine tuberculosis, more particularly in dairy herds.



The meat and meat-food products inspected and prepared for export under the supervision of officers of the Meat Export Branch during each month of the calendar year are as shown hereunder :—

1914.	Canned Meats (Packages).	Meat Extract and Essence (Packages).	Mutton and Lamb (Carcases).	Beef (Quarters).	Veal (Carcases).	Pork (Carcases).	Meat, other than carcasses (packages), pairs of legs of mutton, buttocks of beef, kidneys, salted meat, etc.
January.....	39,387	567	218,687	20,985	854	10	5,535
February.....	28,779	614	85,898	20,916	2,405	45	7,670
March.....	22,304	417	67,000	30,828	1,442	25	5,104
April.....	24,021	485	34,215	11,659	2,525	4	5,010
May.....	36,331	698	14,580	3,108	825	79	2,590
June.....	40,712	815	27,708	3,875	1,361	58	2,891
July.....	35,398	517	67,694	4,434	805	20½	5,049
August.....	22,831	362	195,240	9,242	282	5	5,190
September.....	35,817	451	342,335	15,412	570½	20	3,145
October.....	38,400	557	330,217	15,420	405½	...	3,145
November.....	59,335	680	302,690	10,759	1,141	42	4,335
December.....	54,114	963	239,492	10,447	673½	94	4,612
	437,429	7,129	1,925,756	160,385	13,296½	402½	54,276

These monthly returns may be summarised as follows :—

Canned meats (packages) ... ..	437,429
Extract and essence (packages) ... ..	7,129
Mutton and lamb (carcasses) ... ..	1,925,756
Beef (quarters) ... ..	160,385
Veal (carcasses) ... ..	13,296½
Pork (carcasses) ... ..	402½
Meat, other than carcasses (packages), pairs of legs of mutton, buttocks of beef, kidneys, salt meat, &c. ... ..	54,276

The above figures show that the Meat Export Trade of this State is of considerable magnitude and importance.

The canning business in particular is rapidly expanding. The value of the canned meats and meat extract exported during the year has been roughly estimated at £750,000.

#### *Reinspection of Meat and Meat-Food Products.*

Considerable quantities of meat on re-inspection have been found to be sour, putrid, or otherwise unwholesome, and have been condemned. The following table gives particulars of the parts condemned. The condemnations took place for the most part at canning factories and freezing works :—

Ox skirts ... ..	3,250 lb.	Mutton carcasses ... ..	82
Ox kidneys ... ..	4,000	Veal quarters ... ..	70
Beef (pieces) ... ..	3,916 lb.	Ox tails ... ..	30
Buttocks of beef ... ..	857	Chucks and blades ... ..	18
Quarters of beef ... ..	100	Briskets ... ..	5
Ox checks ... ..	250	Pigs' heads ... ..	4
Ox tongues ... ..	682	Ox livers ... ..	68
Sheep kidneys ... ..	50,000	Ox hearts ... ..	20
Mutton ... ..	2,451 lb.		

Briskets of beef for export are required, under Commerce Act Regulations, to be free from worm nests (*Filaria Gibsoni*).

The examination of briskets is chiefly carried out at canning works.

30·5 per cent. of briskets examined were found to be affected with this parasite, and were rejected for export.

Total briskets examined, 263,863; free from nodules, 183,378; affected with nodules, 80,485 or 30·50 per cent.

The conduct of the Staff and the work carried out by individual officers have been satisfactory.

G. K. THORPE,

Veterinary Inspector-in-Charge of Meat Export

## REPORT OF THE CHIEF SANITARY INSPECTOR FOR THE YEAR ENDED 31st DECEMBER, 1914.

### *Inspectorial Staff.*

Chief Inspector—E. A. CRESSWICK, Cert. R.S.I.

T. A. W. CURRY, Cert. R.S.I.

E. M. JACKSON, Cert. R.S.I.

H. M. WORMALD, Cert. R.S.I.

In the year under review the staff has been very fully occupied. During the latter half of it progress was made with much of the work, which had been unavoidably held over owing to the epidemic of smallpox, which began in July, 1913, and has continued up to the end of this year, although latterly with considerable diminution in the number of cases.

*Changes of Staff.*—Inspector H. M. Wormald was appointed in February, 1914, to the vacancy caused by the transfer of Inspector Kenway to the office of the Medical Officer of Health to the Metropolitan Combined Districts.

*Investigational and Routine Work.*—The following is a summary of the work by this staff, comprising inspections and investigations over a large area of the State :—

#### *Inspections.*—

“ Calico Town,” Daceyville	...	...	...	...	...	...	6
Country Towns	...	...	...	...	...	...	32
Country water supplies	...	...	...	...	...	...	6
Sanitary depots and proposed sites for same	...	...	...	...	...	...	33
Insanitary buildings and drainage	...	...	...	...	...	...	11
Septic tanks and proposed sites	...	...	...	...	...	...	15
Noxious trade premises	...	...	...	...	...	...	350
Military camps	...	...	...	...	...	...	6
Woolseours	...	...	...	...	...	...	3
Unhealthy building lands	...	...	...	...	...	...	72
Disinfection of premises after removal of smallpox patients	...	...	...	...	...	...	630
Supervision of erection in country towns of temporary smallpox wards	...	...	...	...	...	...	2

#### *Investigations.*—

Infectious disease outbreaks in country towns	...	...	...	9
Complaints of nuisances in Metropolitan District	...	...	...	49
Conducting Police Court proceedings	...	...	...	14
Giving evidence on behalf of Local Authorities or Police	...	...	...	5

*Country Towns Inspection.*—This work has been continued, thirty-two towns being inspected or reinspected during the year, and full reports submitted. The work is carried out in a very systematic manner, and the reports include a description of the town, its situation, population, climate, soil, water supply, surface and subsoil drainage; sewerage systems, disposal of garbage, liquid wastes and nightsoil; and the methods adopted for storage and sale of meat, milk, fish, &c. The conditions of buildings and building areas are enquired into, and a classification made of the houses. Inspections are made of hospitals, common lodging-houses and hotels, especially in regard to their sanitary conditions; premises on which offensive trades are conducted, cemeteries, &c., are visited. In localities where outbreaks of infectious disease occur, particular attention is paid to the sanitary administration. The officer reporting on the town submits recommendations dealing with each matter where neglect to carry out requirements provided by law is shown, and local authorities are requested to have them carried into effect within a reasonable time. The Department of the Attorney-General and of Justice is supplied with a copy of the report dealing with the sanitary condition of hotels, and with recommendations regarding necessary improvements, which are forwarded for action by the local Licensing Bench and Licensing Inspector.

After



After a reasonable period reinspection of the town is made, and if the recommendations have not been complied with the local authority and hotelkeepers are warned of the action which will be taken by the Department for non-compliance with the recommendations. A final notice is always served prior to legal action being instituted.

The inspections of country towns are made with a view of ascertaining how the various laws relating to public health are carried out by local authorities, and also to generally assist and advise them. Such help is appreciated in most instances. Shire and Municipal Councils are responsible for maintaining the areas under their control in a sanitary condition; and neglect of their duties and obligations in this respect has often led to outbreaks of sickness. On account of routine and other urgent duties, the limited staff of Sanitary Inspectors are unable to adequately deal with this important work, and towns are therefore only reinspected at long intervals. The length of time elapsing between inspections has the effect of allowing Councils to neglect their duties, and tends to their recurrence to old and slipshod insanitary methods, fraught with danger of epidemics of infectious disease. It is respectfully urged that at least two additional inspecting officers be appointed to the sanitary staff.

It is to be noted with regret that the Board of Health still lacks the power to prosecute persons for individual breaches of the Local Government Ordinances in cases where local authorities decline or neglect to do so when requested by the Board; or are themselves offenders. Certain Shire and Municipal Councils also still neglect or decline to acquire certain powers under the Local Government Act which have a very important bearing upon the public health of their districts; amongst these may be mentioned the neglect to acquire powers for regulating the construction of buildings and closets; the collection and disposal of nightsoil and garbage; the construction and maintenance of butchers' premises, fish and oyster shops, and powers for abatement of nuisances from smoke, fumes and offensive wastes. Until all these matters are made compulsory upon local authorities, insanitary conditions in country towns may be expected. During the year there has been a revision of the Local Government Ordinances, and the powers of Councils have been considerably extended in matters pertaining to public health, but the revised Ordinances have not yet been made applicable. Important amendments to the Public Health Act are also under consideration.

In the Metropolitan District two Councils (North Sydney and Marrickville) are erecting the Melbourne—Stamp-Powell—type of garbage destructor, and a third Council has decided to instal one. Unfortunately, however, there are still many complaints of nuisance—usually well founded—arising from the numerous garbage tips in the metropolitan area. Compulsory destruction of garbage by fire or other approved means is becoming most urgent in the metropolis, as suitable sites for tips are now almost unobtainable owing to localities becoming more closely settled. Reasonable effort to cover the refuse and thus avoid offence therefrom is taken in a few instances, but most of the areas where garbage is deposited constitute dangerous and offensive nuisances, and cause much discomfort to residents in the vicinity.

*Smallpox Epidemic.*—The smallpox outbreak continued throughout the year, and yielded 632 cases. Houses where the patients lived were inspected, and the disinfecting staff sprayed the dwelling throughout with a 5 per cent. solution of formalin, the patient's bedroom being occasionally fumigated with formalin and permanganate of potash. Mattresses and bedding from patient's rooms were removed to the Disinfecting Station at Woolloomooloo Bay, where they were disinfected by steam before being returned. Considerable work devolved on the staff in tracing contacts of cases. These persons were either vaccinated and kept under surveillance, or removed to the Quarantine Station at North Head. The places of employment of patients were disinfected, and arrangements made for the vaccination of fellow employees. The premises disinfected included hotels, warehouses, factories, and other business premises, carrying large stocks of perishable goods, and such places were usually disinfected after the ordinary closing hours. With the exception of a few instances where it was found necessary to destroy bedding, no complaints were made against the Department; and no claims have been received for damage to goods or loss of business.

Temporary structures for the accommodation of smallpox patients were erected at two country hospitals. This temporary accommodation consisted of strongly constructed wooden framing, roofed with iron, and enclosed with calico; and provided with beds, bedding, &c.

*Railway Camps.*—Inspections were made of nine railway camps, and in most instances considerable improvement was found in the sanitary conditions previously existing. In 1913 the Railway Commissioners appointed a medical officer, one of whose duties it is to select suitable sites for camps. He has applied a code of desirable regulations to secure the proper arrangement of camps, adequate number of closets of approved design, collection of pans and disposal of nightsoil; removal of garbage, and general cleanliness of the camp site. Provision is also made for a clean water supply, and for control of stores supplying food. A sanitary officer is employed at several camps to enforce the measures indicated above, and the precautions taken have resulted in a considerable decrease in the number



number of cases of typhoid fever, and other illnesses previously reported from such congregations of workmen. Several cases of smallpox occurred at one camp; and a slight outbreak of diphtheria at another, but these were thought to be due to direct infection from an imported case, and not to insanitary conditions at the camps.

*Disposal of Nightsoil by Drying.*—The Canterbury Council has now installed three desiccators of the Stamp-Powell type, and in that municipality the nightsoil from over 8,000 pans is weekly converted into a sterilised, inodorous powder of considerable manurial value. The desiccating plant is on similar lines to that installed by the Willoughby Municipality, and described in my report for 1913. The offensive vapours from the desiccators are treated by condensation, and are finally discharged under the furnace. Except for some local effluvia during the process of emptying the pans into the dryer, there is no nuisance. The polluted water from washing the pans is treated with the nightsoil. The pans are cleansed by hot water and steam, and the condensed vapours from this part of the plant are passed through a filter and disposed of on broken-up ground. The treatment of nightsoil as now carried out in the municipalities of Canterbury and Willoughby is efficient and hygienic; prevents contamination of the soil and watercourses, and produces a valuable by-product. The proprietors of the process erect the plant and sheds, carry out the work of desiccation, and cleanse and steam the pans at a cost of 2½d. per pan.

During the year thirty-three inspections were made of sanitary depots, or sites submitted for approval. Suitable areas for disposal of nightsoil by trenching in the ground are becoming more difficult to obtain within reasonable distance of townships, and protests against the use of proposed sites are constantly received.

*Unhealthy Building Areas.*—Under section 55 of the Public Health Act, which is administered directly by the Board of Health, ten areas were proclaimed unfit for building purposes. These were situated at Austinmer, Bexley, Hurstville (4), Manly, Narrabeen, and Rockdale (2). The areas were either subject to inundation by tidal or storm water, or unhealthy owing to swampy conditions due to the accumulation of stormwater and offensive liquid wastes. Several other low-lying areas have been inspected, and where necessary, levels have been obtained and plans prepared. In the case of land already under proclamation seventy-two inspections were made.

When land is proclaimed unfit for building purposes a copy of the proclamation is served on each owner wherein is specified the conditions which are considered necessary to render the land fit to be built upon, such as removal of refuse; filling in with clean earth; raising the surface to suitable levels; concreting the area to be occupied by buildings; fixing the height of the floors above ground, and ventilating the space beneath.

Subdivisions of low-lying and unhealthy lands continue to be submitted by the owners to local authorities, who, failing the power to withhold approval on the grounds that the land is unhealthy, often report the matter to this Department with a request that action be taken to prevent building on the area.

During the year two persons were prosecuted by the Department for building on a proclaimed area without complying with the conditions of notice, and were each fined £2, with 11s. costs of court. As pointed out in my last annual report, several amendments are required to ensure efficient administration of this part of the Act.

*Noxious Trades.*—The Noxious Trades Act applies to the whole of the county of Cumberland, the Hunter River Combined Sanitary District, and to fourteen Municipalities and three Shires in other parts of the State. Extensions were made during the year to Coonamble, Tamworth and Goulburn. The attached tables show the districts, number and class of trade, and efficiency of the local supervision. In 1914, 632 licenses were issued. The number of trades do not agree with the total number of licenses, as several incidental trades are carried on by one trader under one license. Although the work of supervising noxious trades premises was interfered with by the smallpox epidemic, premises and apparatus for carrying on noxious trades were inspected, mostly prior to issue of license being recommended. The Board of Health has the duty of deciding what trades shall be declared noxious, and of framing regulations for their control; and it gives or withholds approval to local authorities to issue licenses. Inspections are made from time to time to ensure that the regulations are complied with and to ascertain the efficiency of the supervision by the local authority. Five prosecutions were undertaken by the Department for breaches of regulations, and two by local authorities during the year. Complaints were received of nuisance caused by noxious trades establishments at Alexandria and Mascot. Inspections were made regularly at night, when most of the work is carried on, with the result that proceedings were taken against several traders, the cases being set down for hearing early in 1915.

There has been extensive pollution of Shea's Creek, Botany district, by wastes from woolscouring works in the vicinity, and renewal of licenses applied for by four traders was refused, and the applicants informed that it would be necessary for them to obtain more suitable sites elsewhere. Owing to the small area of available land, adequate purification of the wastes prior to discharging into Shea's Creek is impracticable. The woolscours and tanneries at Botany can be connected at an early date with the Long Bay Sewer which is now nearing completion, and this will prevent the extensive pollution of Botany Bay which occurs at present.

TABLE

TABLE showing the number of Licensed Noxious Trades Premises in each Municipality and Shire within the County of Cumberland.

District.	Fat-extractor.	Fat-melter.	Bone-boiler.	Bone-grinder.	Glue-maker.	Pig-keeper.	Poultry-farmer.	Gut-scraper.	Knacker.	Rag-dealer.	Rag-picker.	Flock-maker.	Manure-maker.	Wool-scourer.	Total Number Licensed.	Efficiency of Supervision by Local Authority.
<b>Municipalities—</b>																
Sydney .....	...	...	...	...	...	...	...	...	...	1	1	...	...	...	2	Fair.
Alexandria .....	12	1	3	3	2	4	2	3	2	1	6	2	9	4	32	"
Annandale .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	"
Ashfield .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	"
Auburn .....	1	...	...	...	...	2	2	1	...	...	...	...	...	...	6	Good
Balmain .....	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	"
Bankstown .....	...	...	...	...	...	23	38	1	3	...	...	...	...	...	45	"
Bexley .....	...	...	...	...	...	4	7	...	...	...	...	...	...	...	7	"
Botany .....	4	...	...	...	...	17	22	...	...	...	...	...	...	12	38	"
Campbelltown .....	2	...	...	...	...	2	...	...	...	...	...	...	...	...	4	Fair.
Canterbury .....	2	...	...	...	...	14	12	1	...	...	...	...	1	...	18	Good.
Castlereagh .....	1	...	...	...	...	2	...	...	...	...	...	...	...	...	3	Fair.
Drummoyne .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	"
Eastwood .....	2	...	...	...	...	4	2	...	...	...	...	...	...	...	6	"
Enfield .....	2	...	...	...	...	2	...	1	...	...	...	...	...	...	5	"
Glebe .....	...	...	...	...	...	...	...	...	...	1	1	...	...	...	2	Good.
Granville .....	2	...	1	2	...	7	1	1	1	...	1	...	2	...	11	"
Hurstville .....	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	"
Kogarah .....	...	...	...	...	...	2	2	...	...	...	...	...	...	...	2	"
Lane Cove .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	"
Leichhardt .....	...	1	...	...	...	...	...	...	...	...	2	...	...	...	3	"
Liverpool .....	3	...	...	...	...	3	2	1	...	...	...	...	...	1	8	Fair.
Manly .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	"
Marrickville .....	...	1	...	...	...	1	2	...	...	...	1	...	...	2	6	Good.
Mascot .....	2	...	...	1	...	14	11	...	...	...	...	...	...	...	19	Fair.
Mulgoa .....	1	...	...	...	...	1	...	...	...	...	...	...	...	...	2	Poor.
Penrith .....	3	...	...	...	...	2	...	...	...	...	...	...	...	...	5	Fair.
Petersham .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	Good.
Prospect .....	3	...	...	...	...	7	1	...	...	...	...	...	...	...	11	"
Randwick .....	...	...	...	...	...	3	3	...	...	...	...	...	...	1	5	"
Redfern .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	"
Richmond .....	5	...	...	...	...	4	...	...	...	...	...	...	...	...	9	Poor.
Rockdale .....	1	...	...	...	...	3	11	...	...	...	...	...	...	...	13	Good.
Rookwood .....	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	Fair.
Ryde .....	1	...	...	...	...	7	6	...	...	...	...	...	...	...	8	Good.
St. Peter's .....	1	...	...	...	...	1	...	...	...	...	2	...	...	...	4	"
St. Mary's .....	5	...	...	...	...	4	...	...	...	...	...	...	...	...	9	Fair.
Smithfield .....	1	...	...	...	...	1	...	...	...	...	...	...	...	1	3	"
Waterloo .....	1	...	...	...	...	...	...	...	...	...	1	...	...	...	2	Good.
Waverley .....	...	...	...	...	...	4	5	...	...	...	...	...	...	...	5	Fair.
Willoughby .....	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	"
Windsor .....	4	...	...	...	...	2	...	1	...	...	...	...	...	...	7	"
<b>Shires—</b>																
Baulkham Hills ...	2	...	...	...	...	1	...	...	...	...	...	...	...	...	3	Fair.
Blacktown .....	6	...	...	...	...	8	3	...	...	...	...	...	...	...	16	"
Bulli .....	8	...	...	...	...	9	3	...	...	...	...	...	...	...	18	Good.
Hornsby .....	3	...	...	...	...	4	1	...	...	...	...	...	...	...	8	Fair.
Kuring-gai .....	2	...	...	...	...	4	1	...	...	...	...	...	...	...	8	Good.
Nepean .....	3	...	...	...	...	3	...	...	...	...	...	...	...	...	6	Fair.
Sutherland .....	3	...	...	...	...	5	...	...	...	...	...	...	...	...	8	"
Warringah .....	3	...	...	...	...	10	11	...	...	...	...	...	...	...	18	Good.
Wollondilly .....	1	...	...	...	...	1	...	...	...	...	...	...	...	...	2	Fair.
	91	3	4	6	2	189	152	10	6	3	20	2	12	21	399	

TABLE showing the number of Licensed Noxious Trades Premises within the Hunter River Combined Sanitary District.

<b>Municipalities —</b>																
Adamstown .....	1	...	...	...	...	2	2	...	...	...	...	...	...	...	3	Fair.
Greta .....	1	...	...	...	...	1	...	...	...	...	...	...	...	...	2	"
Hamilton .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	"
Maitland West .....	1	...	...	...	...	1	...	...	...	...	...	...	...	...	2	"
Merewether .....	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	"
New Lambton .....	2	...	...	...	...	3	1	...	...	...	...	...	...	...	5	"
Plattsburg .....	2	...	...	...	...	3	...	...	...	...	...	...	...	...	5	"
Wallsend .....	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	"
Waratah .....	1	...	...	...	...	4	...	...	...	...	...	...	...	...	5	"
Wickham .....	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	"
<b>Shires—</b>																
Bolwarra .....	4	...	...	...	...	4	...	...	...	...	...	...	...	...	8	"
Cessnock .....	24	...	...	...	...	24	1	...	1	...	...	...	...	...	48	"
Lake Macquarie ...	11	...	...	...	...	13	2	...	...	...	...	...	...	...	24	"
Port Stephens .....	5	...	...	...	...	5	...	...	...	...	...	...	...	...	10	"
Tarro .....	18	...	...	...	...	16	2	...	...	...	...	...	...	...	34	"
	70	...	...	...	...	78	9	...	1	...	1	...	...	...	149	



TABLE showing the Number of Licensed Noxious Trades Premises in Municipalities and Shires in other parts of the State to which the Act has been extended.

District.	Fat-extractor.	Fat-melter.	Bone-boiler.	Bone-grinder.	Glue-maker.	Pig-keeper.	Poultry-farmer.	Gut-scraper.	Knacker.	Rag-dcaler.	Rag-picker.	Flock-maker.	Manure-maker.	Wool-scourer.	Total Number Licensed.	Efficiency of Supervision by Local Authority.
<b>Municipalities—</b>																
Broken Hill .....	1	1	...	1	...	17	6	1	...	...	...	...	...	...	21	Poor.
Casino .....	4	...	...	...	...	5	...	...	...	...	...	...	...	...	9	"
Cobar .....	3	...	...	...	...	3	...	...	...	...	...	...	...	...	6	Fair.
Coonamble .....	2	...	...	...	...	2	...	...	...	...	...	...	...	...	4	"
Dungog .....	2	...	...	...	...	2	...	...	...	...	...	...	...	...	4	"
Goulburn .....	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2	"
Inverell .....	4	...	...	...	...	6	...	...	...	...	...	...	...	1	11	Good.
Lismore .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	"
Moama .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	Fair.
Moree .....	4	...	...	...	...	4	...	...	...	...	...	...	...	...	8	"
Murwillumbah .....	1	...	...	...	...	1	...	...	...	...	...	...	...	...	2	"
Tamworth .....	...	...	...	...	...	2	1	1	...	...	...	...	...	...	3	"
Ulmara .....	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	Good.
Wagga .....	...	...	...	...	...	4	1	...	...	...	...	...	...	...	4	"
<b>Shires—</b>																
Blaxland .....	13	...	...	...	...	14	...	...	...	...	...	...	...	...	27	Good.
North Illawarra ...	6	...	...	...	...	6	...	...	...	...	...	...	...	...	12	Fair.
Tweed .....	9	...	...	...	...	9	...	...	...	...	...	...	...	...	18	"
	51	1	...	1	...	77	8	2	1	...	...	...	...	...	134	
Total in State...	212	4	4	7	2	344	139	12	8	3	21	2	12	21	682	

TABLE showing the Number of Prosecutions for Breaches of Regulations governing Noxious Trades.

Date.	District.	Prosecutor.	Nature of Trade.	Name.	Offence.	Fine and Costs.
1914.						£ s. d.
28 January ...	Waratah .....	Health Department .....	Pig-keeper .....	P.F.M. ....	Reg. B. 4 .....	3 6 0
26 February ...	Alexandria .....	Local Authority .....	Fat-extractor ...	D.F.S. ....	" A. 10 .....	3 3 0
5 May .....	Waratah .....	Health Department .....	" .....	P.F.M. ....	Sec. 13 .....	10 17 0
15 July .....	Teralba .....	" .....	Pig-keeper .....	M.L. ....	Reg. B. 4 .....	1 11 0
30 September ..	Lake Macquarie..	Local Authority .....	" .....	H.J.S. ....	Sec. 13 .....	2 0 0
7 October .....	Richmond .....	Health Department .....	Fat-extractor ...	R.E. ....	Reg. A. 10 ...	0 16 0
7 " .....	" .....	" .....	Pig-keeper .....	C.W.F. ....	" B. 5 .....	2 9 0

TABLE showing Prosecutions by Sanitary Staff for Breaches of other Acts or Regulations.

Date.	District.	Prosecutor.	Name.	Offence.	Fines and Costs.
1914.					£ s. d.
26 March .....	Uralla .....	Health Department ...	C.Y. ....	Section 65 P.H. Act .....	Order complied with
26 " .....	" .....	" .....	C.Y. ....	" 65 .....	" 9 "
24 April .....	Burruga .....	" .....	T.C. ....	Reg. 17 P.F. Act .....	7 " 0
24 " .....	" .....	" .....	T.C. ....	" 9 C.S. & D.A. & M. Act.	1 6 0
23 October ...	Manly .....	" .....	G.S. ....	Section 55 P.H. Act .....	2 11 0
23 " .....	" .....	" .....	J.M. ....	" 55 .....	2 11 0
24 November ..	Nowra .....	" .....	G.M. ....	" 74 .....	8 2 0

*Special Inspections.*—For the purpose of assisting local authorities in country centres, seventy-six special inspections were made. This work included investigation of outbreaks of infectious diseases, and other sanitary matters requiring urgent attention; reports on insanitary dwellings, unhealthy lands, defective drainage and sewerage, septic tank installations, and proposed sites for septic tanks and sanitary depots; inquiries concerning pollution of streams or other water supplies, nuisances from offensive trades, neglect to properly carry out sanitary services, &c.; and attendances at Police Courts as prosecutor or witness.

As a result of the conditions discovered on some of these visits, prosecutions were undertaken by the sanitary staff against persons for preparing food on unclean premises; for having dirty slaughtering premises; for nuisances caused by cesspits; and for depositing nightsoil in a creek, the water of which was used for domestic purposes.

In the Metropolitan District forty-nine complaints of nuisance or insanitary conditions, including several referring to wharves and vessels, were investigated. Reports and recommendations were submitted in each case, and reinspections made where necessary to ascertain if the work had been carried out.

Several inspections were made of "Calico Town," Botany; and prior to the departure of the first contingent of troops from Sydney, the sanitary arrangements at six military camps were



were inspected. In consequence of an outbreak of infectious disease at the Deaf and Dumb Institute, Darlington, the whole of the dormitories, bedrooms, schoolrooms, bedding, and books at this large institution were thoroughly disinfected by the Sanitary Staff of the Department during the school vacation.

*Destruction of Rats.*—Three rat catchers are employed by this Department to trap rats at the different Sydney wharves for the purpose of examining them to ascertain their freedom from plague. During the early part of the year the services of the rat catchers were occasionally made use of for cleansing and disinfecting work in connection with the smallpox outbreak. An inspection was made of all the Sydney wharves, and it was found that as a consequence of the reconstruction of many of the old wharves and buildings, and the concrete sheathing of the Darling Harbour wharves, less harbourage is afforded; and that generally rats are less numerous than formerly. The regular application by the Harbour Trust of a steam jet on the face of wharves and piles has also an excellent effect in keeping down rats. The Trust now regularly employs a ratcatcher on the wharves, as also do several of the shipping companies. The destruction by fumigation of rats in ships is strictly enforced by the Federal Quarantine Department with good results.

*Total number of rats trapped during 1914.*

Health Department Staff (three catchers)	...	...	...	...	2,214
City Council Staff (6 catchers)	...	...	...	...	6,137
Rats received from other sources	...	...	...	...	1,097
Total					9,448

All of these rats were examined in the Bacteriological Laboratory of the Department, and were found to be free from plague. Amongst the number were 455 pregnant rats in which there were 3,116 young. Five hundred and twenty rats were found and destroyed which were too putrid for examination.

*Qualified Sanitary Inspectors.*—The annual examination for a certificate of competency in sanitary knowledge, qualifying successful candidates to hold positions as sanitary inspectors within the United Kingdom, excepting in the City of London, was held in December by the Local Board of Examiners appointed by the Royal Sanitary Institute, London. Twenty-one candidates were successful, and three candidates obtained the higher certificate for proficiency in Sanitary Science. At the examinations held at the Sydney Technical College for Sanitary Inspectors thirty-five candidates were successful. There are now eighty Local Authorities employing Inspectors holding one or other of the above certificates, while 240 Local Authorities employ uncertificated persons. The Public Health and Local Government Acts require that councils shall employ a sanitary inspector, but no provision is made that the person appointed shall hold any certificate of competency. The result is that many persons are employed with the title of sanitary inspector who have very little, if any, knowledge whatever of sanitation or matters pertaining to public health; the remuneration of these officers ranges from 10s. a week. In more than forty districts the town clerk also holds the position of sanitary inspector. Under these conditions attention to public health requirements is usually farcical. Shire councils are required to appoint an engineer, and he is often also given the title of sanitary inspector, but as his own duties are usually more than sufficient to keep him fully engaged, the arrangement has been found to be very unsatisfactory with regard to public health matters. Some councils occasionally borrow the services of a qualified inspector from another local authority, if one is available.

The status of the municipal sanitary inspector has been improved, and local influence has become less marked; as a rule in the larger districts the Government agrees to pay £73 yearly towards the sanitary officer's salary, conditionally on the council agreeing that he be employed wholly on public health work, and that approval of the Board of Health be obtained for his appointment and dismissal. This arrangement has been applied to centres where the population reached 3,000, and has been availed of by local authorities in fifty-two instances. Although this arrangement has worked fairly well, especially as regards improved public health services in such centres, the smaller townships, where careless administration and neglect are probable, receive no benefit whatever. Several subsidised inspectors have been dismissed without the approval of the Board, and in other cases dismissal was avoided by resignation. The conscientious health inspector is generally unpopular, but if local authorities are required to appoint properly qualified officers and reasonable security of tenure be provided for, it should result in fearless administration, and consequently healthier conditions to the community.

*Simple Aids to Sanitation.*—The publication issued by this Department, known as "Simple Aids to Sanitation," has been carefully revised and added to in accordance with modern sanitary requirements and Local Government Ordinances. It includes illustrations and descriptions of types of urinal for unsewered districts; scheme for disposal of slopwaters, and a simple method of septic tank installation for unsewered localities; simple type of movable box seats for closets, contrivances to ensure closing of closet seat and proper placing of pans; interceptor for separating the first washings from roofs where rain water is the only source of supply; improved type of dung bin; apparatus for disinfecting closet pans by steam; and apparatus for sterilizing by boiling excreta from persons suffering from typhoid fever. The information contained in this publication is much appreciated by local authorities and the country public generally.

E. A. CRESSWICK,

Chief Sanitary Inspector.

REPORT

## REPORT ON HEALTH-VISITING AND BABY CLINICS FOR THE YEAR ENDED 31st DECEMBER, 1914.

### *Staff.*

#### Nurse Inspectors, Board of Health—

Day, Mrs. B. E.

Burne, Nurse C. M.

Fletcher, Nurse M., Newcastle.

Spencer, Nurse Lucy.

Gould, Nurse E. M.

#### Nurses, Baby Clinics—

##### Alexandria Clinic—

Pike, Nurse Edith.

Williams, Nurse.

##### Woolloomooloo Clinic—

Williams, Nurse Edith.

Falconer, Nurse Athol.

##### Newtown Clinic—

Gallagher, Nurse Flora.

Darrach, Nurse Alice.

##### North Sydney Clinic—

Dollard, Nurse Annie.

Robinson, Nurse Elaine.

##### Balmain Clinic—

Baxter, Nurse Lenore.

Welford, Nurse Constance.

##### Glebe Clinic—

Hungerford, Nurse Molly.

Throsby, Nurse Jeannie.

##### Newcastle Clinic—

Spencer, Nurse Ellen.

Mayton, Nurse Maud.

I HAVE the honor to submit herewith a report of the work of Health-visiting for 1914. During the early part of the year the work was a good deal interrupted by the epidemic of smallpox, as we were required to help with the visiting of contacts of cases, and to assist the medical staff in vaccinating at depots and elsewhere. The establishment, as detailed below, of Baby Clinics in the more populous districts has now placed this important work of Health-visiting on a better basis, which should secure it from interruption in future.

During the year there were several changes in the Staff. Mrs. Day, Senior Inspector, left for England on extended leave on June 20th, and I took up her work, and visited the suburbs under her charge, namely, Alexandria, Botany, Mascot, Redfern, Waterloo, and Darlington. Miss Gould was appointed to visit the districts formerly under my charge, namely, Annandale, Balmain, Forest Lodge, Glebe, and Leichhardt. The work was carried on as usual until the middle of July, when Miss Gould was transferred to Newcastle, but was recalled from there in August for military duty. When Miss Gould was transferred to Newcastle, I took charge of the whole of the Sydney district, and kept up the visiting as well as I could, but was only able to touch the fringe of the work, as the districts are extensive and the amount of work great. In October, Miss Fletcher, who had succeeded Miss Gould at Newcastle, was transferred to Sydney, and took up the work in the Leichhardt-Balmain districts until the end of the year.

As will be seen from the attached table the figures are slightly in advance of those for 1913. The visits paid by Mrs. Day up to June, and by myself to the end of the year, totalled 2,166, and those paid by Miss Gould and Miss Fletcher, 1,507, or a total for the year of 3,663. The falling off in the numbers as compared with the years previous to 1913, was due, as before stated, to the fact that we were withdrawn from our regular work to assist during the smallpox epidemic, and later for military work, and also to the many changes in the staff brought about by the war.

The average age of the infants visited is lower than last year, being 2.1 weeks, as against 3.1 in 1913; this is mainly due to the maternity bonus, for, as was pointed out by Mrs. Day in the last report, the very needy apply for the bonus as early as possible. In no case has the delay in notifying a birth been longer than two weeks, so that in the year under review we have been able to avoid to a great extent the evils arising, especially to young mothers, from the well meant, but so often injudicious and harmful neighbourly advice.

It is the opinion of a large number of medical men that the Maternity Bonus is not put to the use for which it was intended. Our experience is quite the reverse. When the Bonus was first granted, it was a novelty to many of the mothers to have £5, and some of the younger ones spent it frivolously, but they were in the minority. The knowledge that the expenses necessarily incurred by confinement can be met without the usual pinching and saving, and going without necessary nourishment and clothing, is a great help to the complete recovery of the mother—I am speaking of my personal experience with the wives of working-men, who have frequently said to me what a great help it is to have the wherewithal to pay expenses, which are always great at such a time. I might add also that the Maternity Bonus does not cover the maternity expenses, as since the inauguration of the scheme, nurses and doctors' fees have increased considerably.

*Midwives.*—In the manner in which midwives carry out their duties, especially in the more crowded districts, great improvement is required. Uncertificated women are very much in evidence, but a Bill has been prepared for presentation to Parliament, which, it is hoped, will remove this evil. During the year I investigated several cases of septicæmia, which were traced to a midwifery nurse in Alexandria. These cases were due to carelessness and ignorance.

In connection with the work of district visiting, it is most gratifying to find that the instructions given are beginning to bear fruit. When after the lapse of a year or two a home is revisited on the birth of another infant, we often find the mothers carrying out all



all the instructions given during our previous visits. The child is fed regularly, bathed early, and put out in the sun. We also find that the majority of mothers have got over the prejudice of allowing the infant to sleep alone. We have always been welcomed in the home, and even "the mother of ten" is glad of advice. I would like to say here that in the month of April of this year, not a single infant death was registered in the district of Waterloo by the local District Registrar.

Another matter for congratulation is that soothing syrups are on the decrease. Mothers are gradually being taught the evils which attend their use, and in most cases do not resort to them. In the whole of the visiting in the Metropolitan district we only found five instances in which soothing syrups were used. On the other hand, at Newcastle—where district-visiting was only inaugurated in July of this year—four cases were found among the comparatively small number of infants visited in which they were used. Efforts were made in 1914 to get into touch with expectant mothers, but with not very good results during the first few months of this work. When we were able to get into touch with the young expectant mother, the advice given was always attended with good results, especially with regard to the care of the breasts. Midwives frequently neglect this important matter, abscesses of the breast being of frequent occurrence, and often resulting in a bottle-fed child.

Where insanitary conditions existed at the home, reports were made to the local authority. Instructions are always given to the housewife with regard to the proper care of the garbage tin, and the menace of an ill-kept one; and also for the necessity of protecting all food from flies. On the whole, we found the condition of dwellings better than formerly, but it is a difficult matter to make many women realise the need for cleanliness in the house.

*School for Mothers.*—Our work has always been greatly assisted by the nurses attached to the Alice Rawson School for Mothers. Up to August, 1914, there were three such schools, situated in Woolloomooloo, Newtown, and Alexandria, with a nurse attached to each. As it was impossible with our limited staff to pay more than one, or, at most, two visits to each household, we supplied the nurses at the Alice Rawson School for Mothers with a list of mothers and children urgently needing supervision, and in this way kept in touch with those mothers, who, through ignorance, or neglect and irregular feeding, allowed the infant to contract gastro-enteritis. In August, 1914, these schools were taken over by the Government, and established as Baby Clinics, the object being to enlarge the scope of the work and more effectively carry it out. The work of the Health Visitor then practically ceased as to carry on on the same lines meant overlapping, a nurse for outdoor visiting being attached to each clinic. I was appointed Honorary Supervisor of Clinics, and instructed and helped the nurses taking charge of the clinics in organising the work in their districts.

The first Clinic was opened at 22 Henderson-road, Alexandria. This was followed by others at Newtown, Woolloomooloo, and Balmain; and at the close of the year negotiations were in progress for the opening of others at North Sydney, Glebe, and Newcastle. Children up to the age of five years are treated at these clinics.

Attached to each Clinic are two nurses, one for outdoor work, who visits the mothers in their homes and instructs them in detail in the value of breast feeding and the hygiene of infancy. Special stress is laid upon the need for cleanly surroundings, ample ventilation, and free access of sunlight. The danger of infection from flies is pointed out, and mothers are urged to keep the infant as far as possible sheltered from flies, and to take special precautions to keep all food protected from contamination by them.

The indoor Clinic nurse attends to the older babies brought to the Clinic, weighs them regularly, and gives instructions to the mother concerning the care of the infant and herself; and shows her how to prepare and make foods, if the child has to be artificially fed. In all other cases the mother is urged to breast-feed the child up to the age of nine months.

An honorary medical officer is attached to each Clinic, and attends one day a week for the purpose of advising mothers and prescribing for the children. Expectant mothers are also advised as to the care they should take of themselves during pregnancy.

Up to the end of the year the daily average attendance at the Clinics was from 20 to 30, and the work was steadily increasing. Much good work is being done by the Clinic nurses, and it is hoped that by their teaching and advice the mothers and the future generation will materially benefit.

RETURN showing the number of Visits made by Nurses in the Metropolitan and Newcastle Districts during 1914:—

Metropolitan District—January-December.		Newcastle District—July-December.	
Number of first visits .....	3,059	547	
Subsequent visits .....	92	31	
Out, removed, or dead .....	512	123	
	—	—	701
First infants visited .....	3,663	868	182
Illegitimate infants .....		105	19
Average age of infants (weeks) .....		2.1	2.55
Mothers under 21 years .....		222	35
Children sent to Alice Rawson School for Mothers .....		247	...
Number of infants wholly breast-fed .....		802	126
Number of infants partly breast-fed .....		112	55
Number of infants wholly fed with artificial foods .....		59	20



Where infants were either wholly or partly artificially fed, inquiries were made by the visiting nurse as to the nature of the food used. The results of their inquiries are given in the following table. Under the old system of district-visiting, where infants were only seen, except in special cases, during the first six weeks of their life, it was impossible to keep any record of the progress of artificially-fed babies. This will now be remedied, as the establishment of the Baby Clinics will enable systematic records to be kept. It is hoped to keep in touch with the majority of infants from birth up to nine months at least; and possibly up to the age of five years, when the children will come under the care of school medical officers.

*Infants Partly or Wholly Artificially Fed.*

RETURN showing the nature of the Food used.

Nature of Food.	Metropolitan District.	Newcastle District.
Allenbury's Food .....	8	4
Arrowroot .....	2	3
Barley Water .....	2	...
Benger's Food .....	1	1
Biscuits .....	5	8
Bread sop .....	...	1
Condensed milk .....	41	22
"    and Albulaetin .....	1	...
"    and Barley Water .....	13	...
"    and Malt .....	1	...
Cornflour .....	2	...
Cow's milk .....	5	5
"    and Barley Water .....	1	...
Glaxo .....	6	18
Groats .....	1	...
Horlick's Malted Milk .....	1	...
Lactogen .....	...	2
Mellin's Food .....	...	2
Neave's Food .....	...	2
Nestle's Food .....	2	2
Sago .....	1	1
Whey .....	...	2
	— 93	— 73

C. M. BURNE,  
Nurse Inspector.

PRIVATE HOSPITALS ACT, 1908.

REPORT ON THE OPERATION OF THE ACT FOR THE YEAR ENDED 31st DECEMBER, 1914, BY DR. A. T. CHAPPLE, ASSISTANT MEDICAL OFFICER OF THE GOVERNMENT.

THE Private Hospitals Act has now been in force since 14th December, 1908.

During the current year 105 applications for new licenses have been received, of which 53 came from Sydney and environs (*vide* Appendix, Table I) and 52 from the remainder of the State.

The number of applications received during 1914 shows a decrease of 79, compared with the previous year.

The Police were frequently called upon to inspect hospitals according to a detailed report supplied by this Department, pending a visit from an officer of the Department. This course had to be adopted during the year to a greater extent than usual, owing to the outbreak of smallpox, which necessitated the presence in Sydney of departmental officers who ordinarily carry out the duties of country inspections. The position was accentuated in the later months of the year by the outbreak of the war. Redistribution of work was rendered necessary by the absence of some of the staff on active service.

The thanks of the Department are due to the Inspector-General of Police and to the officers under his command throughout the State, for their able assistance in the administration of the Act.

In the metropolis, inspection of all the hospitals has been effected, but those in the country were only partially dealt with, as the outbreak of smallpox, and later the war, prevented full attention being given to them.

APPLICATIONS for License—How dealt with—Comments.

	New South Wales.	Sydney and environs.	Country.
Applications received .....	105	53	52
„ refused .....	28	4	24
„ withdrawn .....	19	2	17
Licenses issued, 1914 .....	161	51	110
„ withdrawn .....	87	28	59
„ cancelled .....	.....	.....	.....

*Exemptions granted.*—Twelve, viz., Tumbarumba 2, Goodooga, Oberon, Carinda, Jindabyne, Copeland, Wentworth, Wilcannia, Taralga, Wiseman's Creek, Rye Park.

*Prosecutions.*—Ten.

*Licenses existing.*—Sydney and environs, 139; remainder of New South Wales, 380; total for the State, 519. This is an increase of 68 on the total existing on 31st December, 1914, Sydney showing an increase of 15, and country an increase of 53. Details of the summary are given in Tables I and II.

*Applications refused.*—In most cases refusals have been due to the fact that the resident managers nominated for approval were unable to submit certificates of training from maternity hospitals. In a few instances refusals were due to the fact that the character of applicants was not wholly above reproach, and sometimes sufficient accommodation for those resident (exclusive of patients) was not provided.

*Applications withdrawn.*—These were usually the result of applicants being informed that the resident managers nominated by them were not eligible.

*Licenses withdrawn.*—In a few cases death has been the cause, but many are due to change of residence or disposal of the hospital to another person.

*Licenses cancelled.*—It is satisfactory to note that the Board of Health has not cancelled any license during the year.

*Exemptions, 1915.*—Nurse Aughtie, Tumbarumba, and Nurse Mathers, Tumbarumba; Nurse Rouse, Goodooga; Carinda Bush Nursing Home, Carinda; Nurse McMahon, Copeland; Nurse Cumming, Wentworth; Nurse Bowden, Wilcannia; Nurse North, Taralga; Nurse Behan, Oberon; Nurse Todd, Wiseman's Creek; Nurse Rush, Jindabyne; Nurse Smith, Rye Park.

*Prosecutions.*—Legal proceedings were taken in ten instances, viz. :—

	Results.
North Sydney .....A. H. Herman .....Breach Sec. 6 (1) .....	Successful.
Tingha.....E. McNamee .....	„
Gundagai .....H. Marshall .....	„
Woodstock .....M. A. Ogle .....	Unsuccessful.
Mullumbimby.....A. T. Jarrett .....	Successful.
Redfern .....A. E. Naughton .....	„
Barham .....M. Daish.....	„
Kogarah .....E. Ferrier .....	„
Barraba.....F. H. Lockart .....	„
Wellington .....Mrs. Stockdale .....	„

## CLASSIFICATION of Private Hospitals licensed in New South Wales.

	Sydney.	Country.	Total in New South Wales.
Hospitals receiving medical, surgical, and lying in cases .....	135	45	180
"          medical and surgical cases only .....	7	7	14
"          lying in cases only .....	87	238	325
Hospitals containing 1 bed .....	17	45	62
"          2 beds .....	24	83	107
"          3 " .....	15	15	30
"          4-5 beds .....	19	77	96
"          6-10 " .....	27	80	107
"          11-20 " .....	16	29	45
"          over 20 " .....	21	1	22

The distribution of these hospitals is indicated in detail in the Appendix, Tables III and IV.

*Comments.*

Sixty-two per cent. of all the private hospitals in the State are licensed for lying-in cases only, being an increase of 1 per cent. on the previous year. Of private hospitals licensed in Sydney and environs 33 per cent. are lying-in hospitals, and in the country 82 per cent.

*Qualifications of Licensees and Resident Managers.*

Of private hospitals conducted in the State, 437 are conducted by licensees who are also resident managers (129 in Sydney and 353 in country districts), and the remaining 32 are those in which a licensee has appointed a resident manager other than himself or herself (10 in Sydney and 22 in country districts).

*Qualifications of Licensees.*

	Sydney.	Country.
Duly qualified medical practitioners ... ..	5	33
Certificated nurses ... ..	119	169
Uncertificated persons ... ..	15	178

*Qualifications of Resident Managers.*

	Sydney.	Country.
Duly qualified medical practitioners ... ..	1	19
Qualified for approval under Section 10 (a) ... ..	8	9
"          "          "          10 (b) ... ..	42	57
"          "          "          10 (c) ... ..	33	24
"          "          "          10 (d) ... ..	55	271

For details of this summary, *vide* Appendix, Tables V and VI.

*Comments.*

Of 326 resident managers appointed under Section 10 (d) (55 in Sydney and 271 in country districts), 137 are trained nurses (43 in Sydney and 94 in country) and 189 are untrained (12 Sydney and 177 country) persons, *i.e.*, who do not possess any hospital certificate at all.

*Comments on certain Sections and Regulations under the Act.*

*Section 11.*—Under this section the following notifiable diseases were reported from licensed hospitals :—

(1) *Diphtheria.*—Artarmon 1, Albury 1, Bega 1, Bangalow 2, Cowra 2, Corowa 1, Chatswood 6, Canowindra 10, Darlinghurst 2, Dubbo 23, Enmore 1, Grafton 1, Gilgandra 18, Ganmain 4, Katoomba 1, Kyogle 3, Lismore 6, Mosman 4, Narrabri 1, Nyngan 1, North Sydney 3, Orange 3, Seone 1, Singleton 2, Summer Hill 1; total 99.

(2) *Erysipelas.*—None.

(3) *Measles.*—Inverell 1, Manly 1, North Sydney 3; total 5.

(4) *Puerperal septicæmia.*—Annandale 1, Bathurst 1, Bondi 1, Darlinghurst 1, Kempsey 1, Paddington 1, Singleton 1, Seone 1, Tumut 1; total, 9.

(5) *Scarlet fever.*—Chatswood 3, Kyogle 1, Lismore 1, North Sydney 3, Peak Hill 1; total, 9.

Hospitals in which septic puerperal cases occurred were immediately prohibited from receiving further lying-in cases, pending the enforcement of the usual regulations as a consequence no second case occurred in any hospital.

*Section 17.*—The wording of this section still gives much trouble owing to the interpretation which many people put on it. The idea is very prevalent that any person may receive two persons in one month, but not more than six a year, without being guilty of any infraction of this Act.

*Regulation 12.*—A vast amount of work has fallen on the staff of the Department in connection with alterations. In many cases it has only been a rearrangement of rooms but additions have been frequent and, in some cases, extensive.

*Regulation 19.*—This has caused private hospitals almost entirely to give up the reception of infectious cases. Only a very few hospitals are properly equipped for these cases, the result being that in many instances the cases are admitted and treated at the public hospitals.

*Regulation*



*Regulation 20.*—This provides that “not more than the number and class of patients mentioned in the license shall be received into any private hospital at any one time.” It has been necessary to caution a few licensees for breaches of this regulation.

*Regulation 24.*—Although the proper register is now found in almost all hospitals when making inspections, yet it is often evident that entries are not made daily as they should be. Accordingly, such resident managers have been duly cautioned.

## APPENDIX.

TABLE I.—Summary of Applications for License under Private Hospitals Act (Sydney and environs).

District.	Applications.				Licenses.			
	No. received.	No. refused.	No. withdrawn.	Not dealt with.	No. issued.	No. withdrawn.	No. cancelled.	No. existing.
Annandale .....	...	...	...	...	...	...	...	3
Arncliffe .....	1	...	...	1	1	...	...	2
Artarmon .....	2	...	...	...	1	2	...	2
Ashfield .....	1	...	...	...	1	...	...	2
Auburn .....	...	...	...	...	...	...	...	2
Balmain .....	2	...	...	...	2	1	...	2
Bondi .....	1	...	...	1	...	...	...	...
Burwood .....	1	...	...	...	1	1	...	3
Camperdown .....	...	...	...	...	...	1	...	...
Carlton .....	...	...	...	...	...	1	...	...
Chatswood .....	2	...	...	1	1	1	...	2
Croydon .....	...	...	...	...	...	1	...	...
Darlinghurst .....	2	...	...	...	2	2	...	9
Darlington .....	1	...	...	1	...	...	...	1
Drummoyne .....	4	...	...	1	3	2	...	1
Dulwich Hill .....	2	...	...	1	...	...	...	2
Eastwood .....	...	...	...	...	...	...	...	1
Enmore .....	3	...	...	...	3	...	...	4
Fairfield .....	1	...	...	...	1	...	...	1
Five Dock .....	2	...	...	...	2	...	...	2
Forest Lodge .....	...	...	...	...	...	...	...	3
Gladesville .....	2	...	...	...	2	...	...	3
Glebe .....	...	...	...	...	...	...	...	3
Gordon .....	...	...	...	...	...	1	...	...
Gore Hill .....	1	...	...	...	1	...	...	1
Granville .....	1	...	...	...	1	1	...	1
Guildford .....	1	...	...	...	1	...	...	1
Habersfield .....	2	...	...	...	2	1	...	2
Harris Park .....	1	...	...	...	1	...	...	2
Hornsby .....	1	...	...	...	1	2	...	1
Hunter's Hill .....	...	...	...	...	...	...	...	1
Hurstville .....	...	...	...	...	...	1	...	...
Kensington .....	...	2	...	...	...	...	...	2
Killara .....	...	...	...	...	...	...	...	1
Kogarah .....	1	...	...	...	1	1	...	2
Lakemba .....	1	...	...	1	...	...	...	1
Lavender Bay .....	1	...	...	...	1	...	...	1
Leichhardt .....	1	...	...	...	1	1	...	3
Longueville .....	...	...	...	...	...	...	...	1
Manly .....	2	...	...	1	1	...	...	7
Marrickville .....	...	...	...	...	...	...	...	5
Mosman .....	...	...	...	...	...	1	...	3
Neutral Bay .....	3	...	...	...	3	...	...	5
Newtown .....	2	...	...	...	2	...	...	2
North Sydney .....	3	...	1	...	3	4	...	10
Paddington .....	2	...	...	...	2	...	...	4
Pennant Hills .....	...	...	...	...	...	...	...	1
Petersham .....	1	1	...	...	1	...	...	8
Pymont .....	...	...	...	...	...	...	...	1
Randwick .....	2	...	...	...	2	2	...	4
Redfern .....	1	1	...	...	1	...	...	3
Rockdale .....	...	...	...	...	...	...	...	1
Rose Bay .....	...	...	...	...	...	...	...	1
Rozelle .....	1	...	...	...	1	...	...	1
Ryde .....	1	...	...	...	1	...	...	1
Stanmore .....	...	...	...	...	...	...	...	2
Summer Hill .....	1	...	...	...	1	...	...	3
Sydney .....	...	...	1	...	...	...	...	2
Wahroonga .....	...	...	...	...	...	...	...	1
Waitara .....	...	...	...	...	...	...	...	1
Waverley .....	3	...	...	1	3	1	...	7
Woollahra .....	...	...	...	...	...	...	...	2
Total .....	59	4	2	8	51	28	...	138

TABLE II.—Summary of Applications for License under Private Hospitals Act, New South Wales (Sydney and environs excepted) 1914.

District.	Applications.				Licenses.			
	No. received.	No. refused.	No. withdrawn.	No. not dealt with.	No. issued.	No. withdrawn.	No. cancelled.	No. existing.
Abermain .....	1	...	...	1	...	...	...	1
Adamstown.....	1	...	...	...	1	...	...	1
Adelong .....	1	...	...	...	1	...	...	1
Albury .....	...	...	...	...	...	...	...	4
Ariah Park .....	1	...	...	...	1	...	...	1
Armidale .....	3	...	...	...	3	2	...	5
Ballina .....	1	1	...	...	1	...	...	2
Balranald .....	...	...	...	...	...	...	...	3
Bangalow .....	1	...	...	...	1	1	...	3
Barham .....	...	...	...	...	...	1	...	...
Barmedman .....	1	1	...	...	1	2	...	1
Barraba .....	1	...	...	...	1	...	...	3
Bathurst .....	1	...	...	1	...	3	...	5
Bega.....	3	...	...	...	3	2	...	1
Bellingen .....	...	...	...	...	...	...	...	1
Berridale .....	1	...	...	1	...	...	...	...
Berrigan .....	...	...	...	...	...	...	...	1
Bingara .....	2	1	...	...	2	1	...	1
Blayney.....	1	...	...	...	1	...	...	2
Bogan Gate .....	...	...	...	...	...	...	...	1
Bomaderry .....	1	...	...	1	...	...	...	...
Bombala.....	...	...	...	...	...	...	...	1
Bourke.....	1	...	...	1	...	1	...	2
Bowraville .....	...	...	...	...	...	...	...	1
Braidwood.....	1	...	...	1	...	...	...	1
Broken Hill.....	3	1	...	...	3	1	...	2
Brooklyn .....	1	...	...	...	1	...	...	1
Brushgrove .....	...	...	...	...	...	1	...	...
Burrowa .....	...	...	...	...	...	1	...	1
Byangum .....	1	...	...	...	1	...	...	1
Byron Bay .....	2	...	...	...	2	...	...	3
Camden .....	...	...	...	...	...	1	...	1
Campbelltown .....	1	...	...	...	1	...	...	2
Canbelego .....	1	...	...	...	1	...	...	1
Candelo .....	...	...	...	...	...	...	...	1
Canowindra.....	...	...	...	...	...	...	...	1
Carcoar .....	...	1	...	...	...	...	...	1
Casino .....	...	1	2	...	...	...	...	3
Cessnock .....	2	...	...	1	1	...	...	2
Cobar .....	1	1	...	...	...	...	...	...
Coal's Harbour.....	...	...	...	...	...	...	...	1
Coledale.....	1	...	...	...	1	...	...	1
Condobolin .....	...	...	...	...	...	...	...	1
Coolamon .....	1	...	...	...	1	1	...	1
Cooma .....	...	...	...	...	...	1	...	1
Coonabarabran.....	...	...	...	...	...	...	...	2
Coonamble .....	3	...	...	...	3	4	...	1
Cootamundra .....	1	...	...	...	1	...	...	4
Coraki .....	1	...	...	...	1	...	...	2
Corowa .....	1	...	...	...	1	1	...	2
Corrimal .....	1	...	...	...	1	...	...	1
Cowra.....	...	...	...	...	...	...	...	4
Crookwell .....	...	...	...	...	...	...	...	3
Culeaim.....	...	1	...	...	...	...	...	2
Cumnock .....	1	...	...	...	1	...	...	1
Dapto.....	1	...	...	...	1	...	...	1
Delegate .....	...	...	...	...	...	...	...	2
Delungra .....	1	...	...	1	...	...	...	...
Deniliquin .....	...	...	...	...	...	...	...	2
Dorrigo .....	1	...	1	...	1	...	...	1
Dubbo .....	1	...	1	...	...	...	...	2
Dungog .....	2	...	...	...	2	...	...	2
Emmaville.....	...	...	1	...	...	...	...	1
Forbes .....	2	3	...	1	1	1	...	2
Gannain .....	...	...	...	...	...	...	...	1
Gerrinton.....	1	...	...	...	1	...	...	1
Gilgandra .....	...	...	...	...	...	...	...	2
Glen Ellen.....	...	...	...	...	...	...	...	1
Glen Innes.....	1	...	...	...	1	2	...	4
Goulburn.....	4	...	...	...	4	...	...	10
Grafton .....	2	...	...	...	2	1	...	8
Grenfell.....	1	...	...	...	1	...	...	2
Gulgong.....	...	...	...	...	...	1	...	1
Gundagai.....	1	...	...	...	1	...	...	3
Gundah .....	...	...	...	...	...	...	...	2
Gunning.....	1	...	...	...	1	...	...	1
Guyra.....	1	...	...	...	1	...	...	1
Hamilton.....	1	...	1	...	...	...	...	...
Hay .....	...	...	...	...	...	...	...	4
Henty .....	...	1	...	...	...	1	...	1
Inverell .....	1	...	...	...	1	...	...	7

TABLE II.—Summary of Applications for License under Private Hospitals Act, New South Wales (Sydney and environs excepted), 1914—*continued*.

District.	Applications.				Licenses.			
	No. received.	No. refused.	No. withdrawn.	No. not dealt with.	No. issued.	No. withdrawn.	No. cancelled.	No. existing.
Jerilderie .....	...	...	...	...	...	...	...	1
Junee .....	...	...	...	...	...	...	...	3
Katoomba .....	1	...	...	1	...	1	...	1
Kempsey .....	...	...	...	...	...	...	...	3
Kurri Kurri .....	...	...	...	...	...	...	...	1
Kyogle .....	...	...	...	...	...	...	...	1
Lake Cudgellico .....	1	...	...	1	...	...	...	1
Lawson .....	1	...	...	...	1	...	...	1
Leeton .....	2	1	...	...	1	1	...	1
Leura .....	...	...	...	...	...	...	...	1
Lismore .....	2	...	...	...	2	1	...	10
Lithgow .....	...	...	...	...	...	...	...	2
Liverpool .....	1	...	...	...	1	...	...	2
Lockhart .....	1	...	...	...	1	...	...	3
Macksville .....	...	...	1	...	...	...	...	2
Maclean .....	2	...	1	2	...	1	...	1
Maitland .....	5	...	1	...	5	3	...	7
Manildra .....	2	...	...	...	2	...	...	2
Manilla .....	3	...	...	...	3	1	...	5
Merriwa .....	...	...	...	...	...	...	...	1
Millthorpe .....	...	...	...	...	...	1	...	...
Milton .....	...	...	...	...	...	...	...	2
Moombooldool .....	...	...	...	...	...	...	...	1
Molong .....	...	...	...	...	...	1	...	1
Moonan Brook .....	1	1	...	...	...	...	...	...
Moree .....	1	...	...	...	1	...	...	3
Morpeth .....	...	...	...	...	...	...	...	1
Moruya .....	1	...	...	...	1	...	...	2
Moss Vale .....	...	...	...	...	...	...	...	3
Mount Victoria .....	1	...	...	1	...	...	...	...
Mudgee .....	2	...	...	...	2	1	...	5
Mullumbimby .....	...	...	...	...	...	...	...	2
Mungindi .....	...	...	...	...	...	...	...	2
Murrumburrah .....	...	...	...	...	...	...	...	2
Murrurundi .....	...	...	...	...	...	...	...	1
Murwillumbah .....	2	...	...	...	2	1	...	5
Muswellbrook .....	...	...	...	...	...	...	...	2
Nabiac .....	1	...	...	...	1	...	...	2
Narrabri .....	1	...	...	2	1	1	...	2
Narrandera .....	...	...	...	...	...	...	...	3
Narromine .....	1	...	...	1	...	...	...	1
Newcastle .....	2	...	...	...	2	1	...	4
Nowra .....	2	...	...	...	2	2	...	3
Nyngan .....	...	...	...	...	...	...	...	2
Orange .....	2	1	1	...	1	...	...	7
Pambula .....	...	...	...	...	...	...	...	1
Parkes .....	1	1	1	...	...	...	...	6
Parramatta .....	2	1	...	1	1	2	...	2
Peak Hill .....	...	...	...	...	...	...	...	1
Pieton .....	1	...	...	...	1	...	...	1
Port Macquarie .....	1	...	...	...	1	...	...	1
Queanbeyan .....	1	...	...	...	1	1	...	1
Quirindi .....	1	...	...	...	1	...	...	5
Richmond .....	...	...	...	...	...	...	...	2
Rylstone .....	1	...	1	...	...	...	...	1
Scone .....	...	...	...	...	...	...	...	4
Singleton .....	...	...	...	...	...	...	...	5
Stroud .....	1	...	...	...	1	...	...	1
Tamworth .....	3	...	1	...	3	1	...	5
Taree .....	...	...	...	...	...	...	...	2
Temora .....	1	...	...	...	1	1	...	7
Tenterfield .....	2	...	...	1	1	2	...	1
Tinonee .....	...	...	...	...	...	...	...	1
Tocumwal .....	1	...	...	...	1	...	...	2
Trangie .....	1	...	...	...	1	1	...	2
Trundle .....	1	...	...	...	1	...	...	1
Tumut .....	...	...	...	...	...	...	...	2
Tumblong .....	1	...	...	1	...	...	...	...
Tuncurry .....	1	...	...	...	1	...	...	1
Uralla .....	...	...	...	...	...	1	...	2
Urunga .....	...	...	...	...	...	...	...	1
Wagga Wagga .....	2	...	...	...	2	1	...	8
Walla Walla .....	1	...	...	...	1	...	...	1
Warialda .....	...	...	...	...	...	1	...	1
Walcha .....	1	...	...	...	1	...	...	1
Warren .....	...	...	...	...	...	...	...	3
Wauchope .....	...	...	...	...	...	...	...	1
Wee Waa .....	1	...	...	...	1	1	...	2
Wellington .....	2	1	...	1	1	1	...	4
Wentworth Falls .....	...	...	...	...	...	...	...	1
Whitton .....	...	...	...	...	...	...	...	1



TABLE II.—Summary of Applications for License under Private Hospitals Act, New South Wales (Sydney and environs excepted), 1914—*continued*.

District.	Applications.				Licenses.			
	No. received.	No. refused.	No. withdrawn.	No. not dealt with.	No. issued.	No. withdrawn.	No. cancelled.	No. existing.
Wingham .....	...	...	...	...	...	...	...	1
Wollongong .....	1	...	...	...	1	...	...	2
Woonona .....	...	...	...	...	...	...	...	1
Wyalong .....	1	...	...	...	1	...	1	3
Wyong .....	2	...	...	...	2	...	...	2
Yass .....	1	...	...	...	1	...	...	2
Young .....	2	...	1	...	2	1	...	7
Total .....	131	24	17	19	110	59	1	360

TABLE III.—Nature of Private Hospitals licensed in Sydney and environs.

District.	Licenses held.	Medical, Surgical, and Lying-in.	Medical and Surgical.	Lying-in.	Beds.						
					1	2	3	4-5	6-10	11-20	Over 20.
Annandale .....	3	.....	.....	3	...	...	1	2	...	...	...
Arncliffe .....	2	1	.....	1	...	1	...	...	1	...	...
Artamon .....	1	1	.....	...	...	...	...	...	1	...	...
Ashfield .....	2	.....	.....	2	...	1	...	...	1	...	...
Auburn .....	2	1	.....	1	...	1	1	...	...	...	...
Balmain .....	2	.....	.....	2	...	...	2	...	...	...	...
Burwood .....	3	1	.....	2	...	1	1	...	...	...	1
Chatswood .....	2	1	.....	1	...	...	...	...	1	1	...
Darlinghurst .....	9	8	1	...	...	...	...	1	...	1	7
Darlington .....	1	.....	.....	1	1	...	...	...	...	...	...
Drummoyne .....	1	1	.....	...	...	...	...	...	...	...	1
Dulwich Hill .....	3	1	.....	2	...	1	...	1	1	...	...
Eastwood .....	1	1	.....	...	...	...	...	...	1	...	...
Enmore .....	4	.....	.....	4	...	3	...	...	1	...	...
Fairfield .....	1	.....	.....	1	1	...	...	...	...	...	...
Five Dock .....	2	.....	.....	2	1	1	...	...	...	...	...
Forest Lodge .....	3	.....	.....	3	...	3	...	...	...	...	...
Gladesville .....	...	.....	1	2	1	1	...	...	1	...	...
Glebe .....	3	1	.....	2	...	...	...	...	2	1	...
Gore Hill .....	1	.....	.....	1	...	1	...	...	...	...	...
Granville .....	1	.....	.....	1	1	...	...	...	...	...	...
Guildford .....	1	.....	.....	1	...	1	...	...	...	...	...
Haberfield .....	2	1	.....	1	...	...	...	1	1	...	...
Harris Park .....	1	.....	.....	1	...	...	1	...	...	...	...
Hornsby .....	1	.....	.....	1	...	...	...	1	...	...	...
Hunter's Hill .....	1	1	.....	...	...	...	...	1	...	...	...
Kensington .....	2	.....	.....	2	...	1	...	1	...	...	...
Killara .....	1	1	.....	...	...	...	...	...	...	1	...
Kogarah .....	2	1	.....	1	...	...	1	...	...	1	...
Lavender Bay .....	1	1	.....	...	...	...	...	...	...	...	1
Leichhardt .....	3	.....	.....	3	3	...	...	...	...	...	...
Longueville .....	1	1	.....	...	...	...	...	...	...	...	1
Manly .....	7	4	.....	3	...	...	1	2	2	2	...
Marrickville .....	4	.....	.....	4	...	1	...	1	2	...	...
Mosman .....	4	2	1	1	...	...	1	1	1	1	...
Neutral Bay .....	5	3	.....	2	...	1	1	...	1	2	...
Newtown .....	2	.....	.....	2	...	1	1	...	...	...	...
North Sydney .....	8	3	1	4	...	1	1	1	2	2	1
Paddington .....	4	1	1	2	...	1	...	1	...	1	1
Pennant Hills .....	1	.....	1	...	...	...	...	1	...	...	...
Petersham .....	7	.....	1	6	2	2	...	1	1	...	1
Potts' Point .....	1	.....	.....	1	...	...	...	...	...	...	...
Pymont .....	1	.....	.....	1	1	...	...	...	...	...	...
Randwick .....	4	2	.....	2	...	1	...	...	...	1	2
Redfern .....	3	1	.....	2	1	...	...	...	1	1	...
Rockdale .....	1	.....	.....	1	1	...	...	...	...	...	...
Rose Bay .....	1	.....	.....	1	...	...	...	1	...	...	...
Rozelle .....	2	.....	.....	2	1	...	1	...	...	...	...
Ryde .....	1	.....	.....	1	...	...	...	...	1	...	...
Stanmore .....	2	1	.....	1	...	...	1	...	...	...	1
Summer Hill .....	3	1	.....	2	...	1	...	...	1	...	1
Sydney .....	2	2	.....	...	...	...	...	...	1	...	1
Wahroonga .....	1	1	.....	...	...	...	...	...	...	...	1
Waitara .....	1	.....	.....	1	1	...	...	...	...	...	...
Waverley .....	6	.....	.....	6	1	...	1	2	3	...	...
Woollahra .....	2	1	.....	1	1	...	...	...	...	1	...
Total .....	139	46	7	87	17	24	15	19	27	16	21

TABLE IV.—Nature of Private Hospitals Licensed in New South Wales (Sydney and environs excepted), 1914.

District.	Licences held.	Medical, Surgical, and Lying-in.	Medical and Surgical.	Lying-in.	Beds.						
					1	2	3	4-5	6-10	11-20	Over 20.
Abermain .....	1	.....	.....	1	1	...	...	...	...	...	...
Adamstown .....	1	.....	.....	...	...	...	...	...	...	...	...
Adelong .....	2	.....	.....	1	...	1	...	...	...	...	...
Albury .....	4	4	...	2	...	1	1	...	...	...	...
Ariah Park .....	1	.....	.....	1	...	...	1	...	...	...	...
Armidale .....	7	2	.....	5	...	2	1	2	1	1	...
Ballina .....	2	2	.....	...	...	...	...	1	1	...	...
Balranald .....	3	.....	.....	3	2	1	...	...	...	...	...
Bangalow .....	2	2	.....	...	...	...	...	1	1	...	...
Barham .....	1	1	.....	...	...	...	...	1	...	...	...
Barraba .....	3	.....	.....	3	...	2	1	...	...	...	...
Bathurst .....	7	1	.....	6	2	1	...	2	1	1	...
Bega .....	1	1	.....	...	...	...	...	...	1	...	...
Bellingen .....	1	1	.....	...	...	...	...	...	1	...	...
Berridale .....	1	1	.....	...	...	1	...	...	...	...	...
Berrigan .....	1	.....	.....	1	...	1	...	...	...	...	...
Bingara .....	1	.....	.....	1	...	1	...	...	...	...	...
Blayney .....	2	1	.....	1	...	...	...	1	1	...	...
Bogan Gate .....	1	.....	.....	1	1	...	...	...	...	...	...
Bomaderry .....	1	.....	.....	1	...	1	...	...	...	...	...
Bombala .....	2	.....	.....	2	1	...	1	...	...	...	...
Bourke .....	3	.....	.....	3	1	1	1	...	...	...	...
Bowraville .....	1	1	.....	...	...	...	...	...	1	...	...
Braidwood .....	1	.....	.....	1	...	1	...	...	...	...	...
Brooklyn .....	1	.....	.....	1	1	...	...	...	...	...	...
Broken Hill .....	3	3	.....	...	...	...	...	2	1	...	...
Brushgrove .....	1	1	.....	...	...	...	...	...	1	...	...
Burrowa .....	1	.....	.....	1	1	...	...	...	...	...	...
Byron Bay .....	3	3	.....	...	...	2	...	1	...	...	...
Byangum .....	1	.....	.....	1	...	1	...	...	...	...	...
Camden .....	2	.....	.....	2	...	2	...	...	...	...	...
Campbelltown .....	2	1	.....	1	...	1	...	1	...	...	...
Canbelego .....	1	.....	.....	1	...	...	...	1	...	...	...
Candelo .....	1	.....	.....	1	...	1	...	...	...	...	...
Canowindra .....	1	1	.....	...	...	...	...	...	1	...	...
Caregar .....	1	1	.....	...	...	...	...	...	1	...	...
Casino .....	3	1	.....	2	...	1	1	...	...	1	...
Cessnock .....	3	1	.....	2	...	1	1	1	...	...	...
Coff's Harbour .....	1	1	.....	...	...	...	...	...	1	...	...
Coledale .....	1	.....	.....	1	...	1	...	...	...	...	...
Condobolin .....	1	.....	.....	1	...	...	1	...	...	...	...
Coolamon .....	1	.....	.....	1	...	...	1	...	...	...	...
Cooma .....	1	1	.....	...	...	...	...	...	2	...	...
Coonabarabran .....	2	1	.....	1	...	...	...	...	1	...	...
Coonamble .....	1	1	.....	...	...	...	...	...	1	...	...
Cootamundra .....	4	2	.....	2	1	...	1	...	1	1	...
Coraki .....	2	1	.....	1	...	...	...	1	1	...	...
Corowa .....	2	2	.....	...	...	...	...	...	1	1	...
Corrimal .....	1	.....	.....	1	...	...	1	...	...	...	...
Cowra .....	4	2	.....	2	...	1	1	1	1	...	...
Crookwell .....	3	2	.....	1	1	...	...	1	1	...	...
Culcairn .....	2	1	.....	1	1	...	1	...	...	...	...
Cumnock .....	1	1	.....	...	...	...	...	1	...	...	...
Dapto .....	1	1	.....	...	...	...	1	...	...	...	...
Delegate .....	2	1	.....	1	...	1	1	...	...	...	...
Dentiquin .....	2	.....	.....	2	1	1	...	...	...	...	...
Dorrigo .....	1	.....	.....	1	1	...	...	...	...	...	...
Dubbo .....	8	3	.....	5	1	2	2	...	1	2	...
Dungog .....	2	.....	.....	2	1	1	...	...	...	...	...
Emmaville .....	1	.....	.....	1	...	...	1	...	...	...	...
Forbes .....	2	1	.....	1	1	...	...	1	...	...	...
Germanton .....	1	1	.....	...	...	...	...	...	1	...	...
Ganmain .....	1	1	.....	...	...	...	...	...	1	...	...
Gilgandra .....	2	2	.....	...	...	...	...	1	1	...	...
Glen Ellen .....	1	.....	.....	1	...	1	...	...	...	...	...
Glen Innes .....	4	1	.....	3	...	2	...	...	2	...	...
Goulburn .....	10	4	.....	6	2	3	1	1	1	2	...
Grafton .....	8	2	.....	6	...	1	3	2	...	2	...
Grenfell .....	2	.....	.....	2	...	...	2	...	...	...	...
Gulgong .....	1	.....	.....	1	...	...	...	1	...	...	...
Gundagai .....	3	.....	1	2	...	...	1	1	1	...	...
Gunnedah .....	2	.....	.....	2	...	...	...	2	...	...	...
Gunning .....	1	1	.....	...	...	1	...	...	...	...	...
Guyra .....	1	1	.....	...	...	...	...	1	...	...	...
Hamilton .....	1	.....	.....	1	...	1	...	...	...	...	...
Hay .....	4	.....	.....	4	...	2	1	1	...	...	...
Henty .....	1	1	.....	...	...	...	...	1	...	...	...
Inverell .....	7	2	1	4	1	1	1	2	1	1	...
Jerilderie .....	1	.....	.....	1	1	...	...	...	...	...	...
Juncie .....	3	.....	.....	3	...	...	2	...	1	...	...
Katoomb .....	2	2	.....	...	...	...	...	...	1	1	...
Kempsey .....	3	2	.....	1	...	...	...	...	2	1	...
Kurri Kurri .....	1	.....	.....	1	1	...	...	...	...	...	...

TABLE IV.—Nature of Private Hospitals Licensed in New South Wales (Sydney and environs excepted), 1914—*continued*.

District.	Licenses held.	Medical, Surgical, and Lying-in.	Medical and Surgical.	Lying-in.	Beds.						
					1	2	3	4-5	6-10	11-20	Over 20.
Kyogle.....	1		.....	.....	.....	.....	.....	.....	.....	1	.....
Lake Cudgellico .....	2	1	.....	1	.....	2	.....	.....	.....	.....	.....
Lawson .....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....
Leeton .....	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Leura .....	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....
Lismore .....	10	4	.....	6	.....	.....	2	2	2	4	.....
Lithgow .....	2	.....	.....	2	1	.....	.....	1	.....	.....	.....
Liverpool .....	2	.....	.....	2	1	.....	.....	1	.....	.....	.....
Lockhart .....	3	2	.....	1	1	1	.....	.....	.....	.....	.....
Macksville .....	2	.....	.....	2	1	.....	.....	1	.....	.....	.....
Maclean .....	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Maitland .....	7	1	1	5	1	3	.....	1	2	.....	.....
Manildra .....	2	1	.....	1	1	.....	1	.....	.....	.....	.....
Manilla .....	5	1	.....	4	.....	2	1	2	.....	.....	.....
Merriwa .....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Milton .....	2	1	.....	1	1	.....	1	.....	.....	.....	.....
Molong .....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....
Moombooldool .....	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Moree .....	3	1	.....	2	.....	.....	1	.....	1	1	.....
Morpeth .....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Moruya .....	2	.....	.....	2	.....	.....	.....	2	.....	.....	.....
Moss Vale .....	3	1	.....	2	2	1	.....	.....	.....	.....	.....
Mount Victoria .....	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....
Mudgee .....	5	4	.....	1	.....	.....	.....	2	3	.....	.....
Mullumbimby.....	2	2	.....	.....	.....	.....	.....	.....	2	.....	.....
Mungindi.....	2	.....	.....	2	.....	1	.....	.....	1	.....	.....
Murrumburrah .....	2	1	.....	1	.....	.....	1	1	.....	.....	.....
Murrurundi .....	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....
Murwillumbah .....	4	1	.....	3	.....	1	.....	1	2	.....	.....
Muswellbrook .....	2	2	.....	.....	.....	.....	.....	.....	2	.....	.....
Nabiac .....	2	1	.....	1	1	1	.....	.....	.....	.....	.....
Narrabri .....	2	1	.....	1	.....	.....	.....	1	1	.....	.....
Narrandera .....	3	1	.....	2	.....	1	.....	1	.....	1	.....
Narromine .....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Newcastle .....	4	1	.....	3	1	.....	1	.....	2	.....	.....
Nowra .....	3	1	.....	2	.....	1	1	.....	1	.....	.....
Nyngan .....	2	1	.....	1	.....	.....	1	.....	1	.....	.....
Orange.....	8	2	.....	6	.....	3	.....	3	1	1	.....
Pambula .....	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Parkes .....	6	4	.....	2	.....	3	.....	.....	3	.....	.....
Parramatta .....	2	.....	.....	2	1	.....	.....	.....	1	.....	.....
Peak Hill .....	1	.....	.....	1	.....	.....	.....	1	.....	.....	.....
Picton .....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Port Macquarie .....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....
Queanbeyan .....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Quirindi .....	5	.....	.....	5	1	2	2	.....	.....	.....	.....
Richmond .....	2	1	.....	1	.....	.....	1	.....	.....	.....	1
Rylstone .....	2	1	.....	1	.....	.....	1	1	.....	.....	.....
Scone .....	4	2	.....	2	.....	.....	2	1	1	.....	.....
Singleton .....	5	1	.....	4	.....	1	1	2	.....	1	.....
St. Mary's .....	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Stroud .....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Tamworth .....	5	1	1	3	.....	.....	.....	2	3	.....	.....
Taree .....	2	2	.....	.....	.....	.....	.....	.....	1	1	.....
Temora .....	7	2	.....	5	1	2	.....	3	1	.....	.....
Tenterfield .....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....
Tinonee .....	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Tocumwal .....	2	2	.....	.....	.....	.....	1	1	.....	.....	.....
Trangie .....	2	.....	.....	2	.....	.....	1	1	.....	.....	.....
Trundle .....	1	.....	.....	1	.....	.....	.....	1	.....	.....	.....
Tumblong .....	1	.....	.....	1	1	.....	.....	.....	.....	.....	.....
Tumut .....	2	.....	.....	2	.....	.....	2	.....	.....	.....	.....
Tuncurry.....	1	.....	.....	1	1	.....	.....	.....	.....	.....	.....
Uralla .....	2	.....	.....	2	.....	.....	.....	2	.....	.....	.....
Urunga .....	1	.....	.....	1	1	.....	.....	.....	.....	.....	.....
Wagga Wagga .....	9	1	.....	8	1	1	3	3	.....	1	.....
Walcha .....	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Walla Walla .....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Warialda .....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Warren .....	3	1	.....	2	1	1	.....	1	.....	.....	.....
Wauchope .....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Wec Waa .....	2	.....	.....	2	.....	2	.....	.....	.....	.....	.....
Wellington .....	4	2	.....	2	.....	1	1	.....	2	.....	.....
Wentworth Falls .....	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....
Wingham .....	1	.....	.....	1	.....	.....	.....	.....	1	.....	.....
Wollongong .....	2	2	.....	.....	.....	1	.....	.....	1	.....	.....
Woonona.....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Wyalong .....	3	1	.....	2	.....	.....	1	1	1	.....	.....
Wyong.....	2	.....	.....	2	.....	1	.....	.....	.....	.....	.....
Yass .....	2	.....	.....	2	2	.....	.....	.....	.....	.....	.....
Young .....	7	.....	1	6	1	2	1	2	.....	1	.....
Total .....	380	135	7	238	45	83	65	77	80	29	1



TABLE V.—Qualifications of Licensees and Resident Managers of Private Hospitals  
Licensed in Sydney and environs, 1914.

District.	Licensee and R.M. identical.	Licensee and R.M. different.	Licensees.			Resident Managers.				
			Duly qualified M.P.	Qualified Nurses.	Un- qualified persons.	Duly qualified M.P.	Under Section—			
							10 (a).	10 (b).	10 (c).	10 (d).
										(1) (2)
Annandale .....	2	1	...	2	1	...	...	1	...	1 ...
Arncliffe .....	2	...	...	1	1	...	...	...	...	1 1
Artarmon .....	1	...	...	1	...	...	...	...	1	...
Ashfield .....	1	1	...	1	1	...	...	1	...	1 ...
Auburn .....	2	...	...	2	...	...	...	...	...	2 ...
Balmain .....	2	...	...	1	1	...	...	1	...	...
Burwood .....	3	...	...	3	...	...	...	...	1	2 ...
Chatswood .....	2	...	...	2	...	...	...	1	1	...
Darlington .....	1	...	...	1	...	...	...	1	...	...
Darlinghurst .....	8	1	...	9	...	...	1	...	7	1 ...
Drummoyne .....	...	1	1	...	...	...	...	...	1	...
Dulwich Hill .....	3	...	...	3	...	...	...	...	1	1 ...
Eastwood .....	1	...	...	1	...	...	...	...	1	...
Enmore .....	4	...	...	4	...	...	...	1	...	3 ...
Fairfield .....	1	...	...	1	...	...	...	1	...	...
Five Dock .....	1	1	...	1	...	...	...	2	...	...
Forest Lodge .....	3	...	...	3	...	...	...	...	...	3 ...
Gladesville .....	3	...	...	3	...	...	...	1	...	2 ...
Glebe .....	3	...	...	...	...	...	...	1	1	1 ...
Gore Hill .....	1	...	...	1	...	...	...	1	...	...
Granville .....	1	...	...	1	...	...	...	...	...	1 ...
Guildford .....	1	...	...	...	1	...	...	...	...	1 ...
Haberfield .....	2	...	...	2	...	...	...	...	1	...
Harris Park .....	1	...	...	1	...	...	...	1	...	...
Hornsby .....	1	...	...	1	...	...	...	1	...	...
Hunter's Hill .....	1	...	...	1	...	...	...	...	...	1 ...
Kensington .....	2	...	...	1	1	...	...	1	...	...
Killara .....	1	...	...	1	...	...	...	...	1	...
Kogarah .....	2	...	...	1	1	...	...	...	1	...
Lavender Bay .....	1	...	1	...	...	...	1	...	...	...
Leichhardt .....	3	...	...	3	...	...	...	1	...	2 ...
Longueville .....	1	...	1	1	...	...	1	...	...	...
Manly .....	6	1	1	5	1	...	...	2	4	...
Marrickville .....	4	...	...	4	...	...	...	4	...	...
Mosman .....	4	...	...	4	...	...	1	1	...	2 ...
Neutral Bay .....	5	...	...	5	...	...	...	1	1	3 ...
North Sydney .....	8	...	...	7	1	...	1	2	3	1 1
Newtown .....	2	...	...	2	...	...	...	2	...	...
Paddington .....	3	1	1	3	...	...	1	1	1	1 ...
Pennant Hills .....	1	...	...	1	...	...	...	...	...	1 ...
Petersham .....	6	1	...	4	3	...	2	3	...	...
Pymont .....	1	...	...	1	...	...	...	...	...	1 ...
Potts' Point .....	1	...	...	1	...	...	...	...	1	...
Randwick .....	4	...	...	4	...	...	...	...	2	2 ...
Redfern .....	3	...	...	2	1	...	...	1	...	1 1
Rockdale .....	1	...	...	1	...	...	...	1	...	...
Rose Bay .....	1	...	...	1	...	...	...	1	...	...
Rozelle .....	2	...	...	2	...	...	...	1	...	1 ...
Ryde .....	1	...	...	1	...	...	...	1	...	...
Stanmore .....	2	...	...	2	...	...	...	1	1	...
Summer Hill .....	3	...	...	3	...	...	...	1	1	1 ...
Sydney .....	2	...	...	2	...	...	...	...	2	...
Wahroonga .....	...	1	...	...	1	1	...	...	...	...
Waitara .....	1	...	...	1	...	...	...	...	...	1 ...
Waverley .....	5	1	...	5	1	...	...	1	...	5 ...
Woollahra .....	2	...	...	2	...	...	...	1	...	1 ...
<b>Total .....</b>	<b>129</b>	<b>10</b>	<b>5</b>	<b>119</b>	<b>15</b>	<b>1</b>	<b>8</b>	<b>42</b>	<b>33</b>	<b>43 12</b>

R.M. signifies Resident Manager; M.P. duly qualified Medical Practitioner. (1) Signifies Nurse qualified, but not strictly in accordance with requirements of Act. (2) Signifies unqualified persons approved under special circumstances.

TABLE VI.—Qualifications of Licensees and Resident Managers of Private Hospitals Licensed in New South Wales (Sydney and environs excepted), 1914.

District.	Licensee and R.M. identical.	Licensee and R.M. different.	Licensees.			Resident Managers.				
			Duly qualified M.P.	Qualified Nurses.	Un-qualified persons.	Duly qualified M.P.	Under Section—			
							10 (a).	10 (b).	10 (c).	10 (d).
										(1) (2)
Abermain .....	1	...	...	1	...	...	...	1	...	...
Adamstown .....	1	...	...	1	...	...	...	...	...	1
Adelong .....	2	...	1	...	1	...	...	1	...	1
Albury .....	4	...	1	3	...	1	...	...	...	3
Arith Park .....	...	1	...	...	...	...	...	1	...	...
Armidale .....	7	...	...	2	5	...	...	...	1	5
Ballina .....	2	...	...	1	1	...	...	...	1	1
Balranald .....	3	...	...	...	3	...	...	...	...	3
Bangalow .....	2	...	2	...	...	2	...	...	...	...
Barham .....	1	...	...	1	...	...	...	...	...	1
Barraba .....	3	...	...	1	2	...	...	1	...	2
Bathurst .....	6	1	1	...	2	...	2	1	...	2
Bega .....	1	...	...	1	...	...	...	...	...	1
Bellingen .....	1	...	...	1	...	...	...	...	...	1
Berridale .....	1	...	1	...	...	1	...	...	...	...
Berrigan .....	1	...	...	...	1	...	...	...	...	1
Bingara .....	1	...	...	...	1	...	...	...	...	1
Blayney .....	2	...	...	1	1	...	...	...	...	1
Bogan Gate .....	1	...	...	...	1	...	...	...	...	1
Bomaderry .....	1	...	...	1	...	...	...	1	...	...
Bombala .....	2	...	...	...	2	...	...	...	...	2
Bourke .....	3	...	...	...	3	...	...	...	...	3
Bowraville .....	1	...	1	...	...	1	...	...	...	...
Braidwood .....	1	...	...	...	1	...	...	...	...	1
Broken Hill .....	3	...	...	2	1	...	...	...	2	1
Brooklyn .....	1	...	...	...	1	...	...	...	...	1
Brushgrove .....	1	...	1	...	...	1	...	...	...	...
Burrowa .....	1	...	...	...	1	...	...	...	...	1
Byangum .....	1	...	...	...	1	...	...	...	...	1
Byron Bay .....	2	1	1	1	1	1	...	...	...	1
Camden .....	2	...	...	...	2	...	...	...	...	2
Campbelltown .....	2	...	...	1	...	...	...	...	1	1
Canbelego .....	1	...	...	...	1	...	...	...	...	1
Candelo .....	1	...	...	...	1	...	...	...	...	1
Canowindra .....	1	...	...	1	...	...	...	1	...	...
Carcoar .....	1	...	...	1	...	...	...	1	...	...
Casino .....	3	...	...	1	2	...	...	...	1	2
Cessnock .....	3	...	...	3	...	...	...	2	1	...
Coff's Harbour .....	1	...	1	...	...	1	...	...	...	...
Coledale .....	1	...	...	...	1	...	...	...	...	1
Condobolin .....	1	...	...	1	...	...	...	1	...	...
Coolamon .....	1	...	...	1	...	...	...	...	...	1
Cooma .....	1	...	...	1	...	...	...	...	1	...
Coonabarabran .....	2	...	...	1	1	...	...	...	...	1
Coonamble .....	1	...	1	...	...	1	...	...	...	...
Cootamundra .....	4	...	...	2	2	...	...	...	...	2
Coraki .....	2	...	...	...	2	...	...	...	...	2
Corowa .....	...	2	2	...	...	...	...	...	...	2
Corrimal .....	1	...	...	1	...	...	...	1	...	...
Cowra .....	4	...	...	1	3	...	...	...	...	1
Crookwell .....	3	...	...	...	1	...	...	...	1	1
Culcairn .....	2	...	...	1	1	...	...	...	...	1
Cumnock .....	1	...	1	...	...	1	...	...	...	...
Dapto .....	1	...	...	...	1	...	...	...	...	1
Delegate .....	2	...	...	...	2	...	...	...	...	2
Deniliquin .....	2	...	...	...	2	...	...	...	...	2
Dorrigo .....	1	...	...	...	1	...	...	...	...	1
Dubbo .....	8	...	...	4	4	...	...	1	...	3
Dungog .....	2	...	...	...	2	...	...	...	...	2
Emmaville .....	1	...	...	...	1	...	...	...	...	1
Forbes .....	2	...	...	1	1	...	...	...	...	1
Ganmain .....	1	...	...	...	1	...	...	...	...	1
Germanton .....	1	...	...	1	...	...	...	...	...	1
Gilgandra .....	1	1	1	1	...	...	...	...	...	2
Glen Ellen .....	1	...	...	...	1	...	...	...	...	1
Glen Innes .....	4	...	...	1	3	...	...	...	...	1
Goulburn .....	9	1	...	5	5	1	...	2	2	1
Grafton .....	8	...	...	5	3	...	...	1	...	4
Grenfell .....	2	...	...	...	2	...	...	...	...	3
Gulgong .....	1	...	...	...	1	...	...	...	...	2
Gundagai .....	2	1	...	2	1	...	1	...	...	1
Gunnedah .....	2	...	...	1	1	...	...	1	...	1
Gunning .....	1	...	...	...	1	...	...	...	...	1
Guyra .....	1	...	...	1	...	...	...	...	...	1
Hamilton .....	1	...	...	1	...	...	...	1	...	...
Hay .....	4	...	...	1	3	...	...	1	...	3
Henty .....	1	...	1	...	...	...	...	...	...	...
Inverell .....	6	1	...	3	4	...	1	...	...	4
Jerilderie .....	1	...	...	...	1	...	...	...	...	1
Junee .....	...	1	...	2	1	...	...	2	...	1
Katoomba .....	2	...	...	2	...	...	...	...	1	...

R.M. signifies Resident Manager; M.P., duly qualified Medical Practitioner. (1) Signifies Nurse qualified, but not strictly in accordance with requirements of Act. (2) Signifies unqualified persons approved under special circumstances.

TABLE VI.—Qualifications of Licensees and Resident Managers of Private Hospitals Licensed in New South Wales (Sydney and environs excepted), 1914—*continued*.

Districts.	Licensee and R.M. identical.	Licensee and R.M. different.	Licensees.			Resident Managers.				
			Duly qualified M.P.	Qualified Nurses.	Un-qualified persons.	Duly qualified M.P.	Under Section—			
							10 (a).	10 (b).	10 (c).	10 (d).
										(1) (2)
Kempsey .....	2	1	1	2	...	...	...	..	...	3 ...
Kurri Kurri .....	1	...	1	1	...	...	...	1	...	... ..
Kyogle.....	...	1	1	...	...	...	...	...	...	1 ...
Lako Cudgellico ..	2	...	...	1	1	...	...	...	...	1 1
Lawson .....	1	...	...	1	...	...	...	...	1	... ..
Leeton .....	1	...	...	1	...	...	...	1	...	... ..
Leura .....	1	...	...	1	...	...	1	...	...	... ..
Lismore .....	10	...	...	6	4	...	...	1	...	5 4
Lithgow .....	2	...	...	1	1	...	...	...	...	1 1
Liverpool .....	2	...	...	1	1	...	...	1	...	... 1
Lockhart .....	3	...	2	...	1	2	...	...	...	... 1
Macksville .....	2	...	...	...	2	...	...	...	...	... 2
Maclean .....	1	...	...	1	...	...	...	1	...	... ..
Maitland .....	7	...	...	4	3	...	1	1	...	2 3
Manildra .....	2	...	1	...	1	1	...	...	...	... 1
Manilla .....	5	...	...	3	2	...	...	2	...	1 2
Merriwa .....	1	...	...	1	...	...	...	1	...	... ..
Milton .....	2	...	...	1	1	...	...	...	1	... 1
Molong .....	1	...	...	...	1	...	...	...	...	... 1
Moonbooldool .....	1	...	...	...	1	...	...	...	...	... 1
Morree .....	3	...	...	2	1	...	...	1	...	1 1
Morpeth .....	1	...	...	1	...	...	...	1	...	... ..
Moruya .....	2	...	...	1	1	...	...	1	...	... 1
Moss Vale .....	3	...	...	2	1	...	...	...	...	2 1
Mount Victoria .....	1	...	1	...	...	1	...	...	...	... ..
Mudgee .....	5	...	...	3	2	...	...	...	1	2 2
Mullumbimby.....	2	...	...	1	1	...	...	...	1	... 1
Mungindi.....	2	...	...	...	2	...	...	...	...	... 2
Murrumburrah .....	1	1	1	...	1	...	...	...	...	1 1
Murrurundi .....	1	...	...	1	...	...	...	1	...	... ..
Murwillumbah .....	2	2	1	2	1	...	...	2	...	1 1
Muswellbrook .....	2	...	...	1	1	...	...	1	...	... 1
Nabiac .....	2	...	...	1	1	...	...	...	1	... 1
Narreabri .....	2	...	...	1	1	...	...	...	1	... 1
Narrandera .....	3	...	...	1	2	...	...	...	...	1 2
Narromine .....	1	...	...	1	...	...	...	...	...	... ..
Newcastle .....	4	...	...	3	1	...	...	2	...	1 ...
Nowra .....	3	...	...	2	1	...	...	1	...	1 1
Nyngan .....	2	...	...	1	1	...	...	...	...	1 1
Orange.....	7	...	...	3	4	...	...	...	1	2 4
Pambula .....	1	...	...	...	1	...	...	...	...	... 1
Parkes .....	6	...	...	2	4	...	...	...	1	1 4
Parramatta .....	2	...	...	2	...	...	...	1	...	1 ...
Peak Hill .....	1	...	...	...	1	...	...	...	...	... 1
Picton .....	1	...	...	1	...	...	...	...	...	1 ...
Port Macquarie .....	1	...	...	1	...	...	...	...	...	1 ...
Queanbeyan .....	1	...	...	...	1	...	...	...	...	... 1
Quirindi .....	5	...	...	2	3	...	...	1	...	1 3
Richmond .....	1	1	1	...	1	...	...	...	1	... 1
Rylstone .....	2	...	...	1	1	...	...	1	...	... 1
Scone .....	4	...	...	2	2	...	...	...	1	1 2
Sing'eton .....	5	...	...	2	3	...	...	1	...	1 3
St. Mary's .....	1	...	...	1	...	...	...	1	...	... ..
Stroud .....	1	...	...	...	1	...	...	...	...	... 1
Tamworth .....	5	...	...	5	...	...	1	2	1	1 ...
Tarce .....	2	...	...	1	1	...	...	...	...	1 1
Temora .....	7	...	1	2	4	1	...	1	1	... 4
Tenterfield .....	1	...	...	1	...	...	...	...	...	1 ...
Tinonee .....	1	...	...	...	1	...	...	...	...	... 1
Tocumwal .....	1	1	1	...	1	...	...	...	...	1 1
Trangie .....	2	...	1	1	...	1	...	...	1	... ..
Trundlo .....	...	1	1	...	...	...	...	...	...	1 ...
Tumut .....	2	...	...	1	1	...	...	1	...	... 1
Tumblong .....	1	...	...	...	1	...	...	...	...	... 1
Tuncurry.....	1	...	...	...	1	...	...	...	...	... 1
Uralla .....	2	...	...	1	1	...	...	...	...	1 1
Urunga.....	1	...	...	...	1	...	...	...	...	... 1
Wagga Wagga .....	9	...	...	6	3	...	...	3	...	3 3
Walcha .....	1	...	...	1	...	...	...	1	...	... ..
Walla Walla .....	...	1	1	...	...	...	...	...	...	... 1
Warialda .....	1	...	...	...	1	...	...	...	...	... 1
Warren .....	3	...	...	...	3	...	...	...	...	... 3
Wauchopo .....	1	...	...	1	...	...	...	1	...	... ..
Weo Waa .....	2	...	...	1	1	...	...	...	...	1 1
Wellington .....	4	...	...	3	1	...	...	2	...	1 1
Wentworth Falls ...	...	1	1	...	...	...	1	...	...	... ..
Wingham .....	1	...	...	1	...	...	...	...	...	1 ...
Wollongong .....	2	...	...	2	...	...	...	...	...	2 ...
Woonona.....	1	...	...	...	1	...	...	...	...	... 1
Wyalong .....	3	...	...	1	2	...	...	...	...	1 2
Wyang.....	2	...	...	2	...	...	...	1	...	1 ...
Yass .....	2	...	...	...	2	...	...	...	...	... 2
Young .....	6	1	1	3	3	1	1	1	...	1 3
Total .....	358	22	33	169	178	19	9	57	24	94 177

R.M. signifies Resident Manager; M.P., duly qualified Medical Practitioner. (1) Signifies Nurse qualified, but not strictly in accordance with requirements of Act. (2) Signifies unqualified persons approved under special circumstances.



## NOTIFICATION OF INFECTIOUS DISEASES, 1914.

NOTIFICATION and prevention of infectious diseases is provided for under the Public Health Act, Part III. It was brought into operation on 1st January, 1898, by a proclamation of Scarlet Fever, Diphtheria, and Typhoid Fever to be infectious diseases for the purposes of the Act. Infantile Paralysis has since been added. The cases and deaths recorded during the year are given in the following tables :—

RETURN showing the number of Cases and Deaths from Typhoid Fever, Scarlet Fever, Diphtheria, and Infantile Paralysis in the Metropolitan Combined District, notified during the year 1914.

Districts.	Typhoid Fever.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Sydney .....	104	4	311	1	345	4	6	.....
Alexandria .....	32	1	21	.....	27	.....	.....	.....
Annandale .....	14	2	33	.....	44	2	.....	.....
Ashfield .....	19	1	39	.....	63	1	5	.....
Balmain .....	15	.....	91	.....	53	2	1	.....
Bexley .....	6	.....	19	.....	53	.....	.....	.....
Botany .....	9	.....	6	.....	15	.....	1	.....
Burwood .....	6	2	18	.....	24	.....	.....	.....
Canterbury .....	36	1	92	1	57	1	3	.....
Concord .....	3	.....	11	.....	11	1	.....	.....
Darlington .....	7	.....	19	.....	13	.....	2	.....
Drummoyne .....	5	.....	39	.....	19	.....	2	.....
Eastwood .....	1	.....	.....	.....	19	.....	.....	.....
Enfield .....	9	1	14	.....	12	.....	.....	.....
Erskineville .....	4	.....	12	.....	25	2	2	.....
Glebe .....	26	4	75	1	65	2	2	.....
Homebush .....	1	.....	5	.....	2	.....	.....	.....
Hunter's Hill .....	2	1	3	.....	5	.....	.....	.....
Hurstville .....	12	3	26	.....	28	.....	.....	.....
Kogarah .....	6	.....	35	1	76	3	.....	.....
Lane Cove .....	.....	.....	2	.....	4	.....	.....	.....
Leichhardt .....	23	1	62	.....	78	2	3	.....
Manly .....	4	.....	3	.....	39	.....	3	.....
Marrickville .....	16	1	85	.....	95	2	3	.....
Mascot .....	27	2	26	.....	26	1	.....	.....
Mosman .....	10	.....	7	.....	21	.....	.....	.....
Newtown .....	26	2	48	.....	90	4	5	.....
North Sydney .....	25	3	37	.....	62	2	.....	.....
Paddington .....	24	2	104	.....	65	1	1	.....
Petersham .....	7	1	34	.....	63	2	2	.....
Randwick .....	27	2	95	.....	98	1	3	.....
Redfern .....	26	3	74	.....	75	3	3	.....
Rockdale .....	9	1	50	1	69	.....	.....	.....
Ryde .....	5	2	7	.....	41	2	1	.....
St. Peters .....	8	.....	62	.....	45	4	2	.....
Strathfield .....	1	.....	6	.....	17	.....	.....	.....
Vaucluse .....	.....	.....	.....	.....	4	.....	.....	.....
Waterloo .....	18	1	11	.....	15	.....	.....	.....
Waverley .....	12	1	45	.....	50	7	8	.....
Willoughby .....	4	.....	31	.....	38	3	2	.....
Woollahra .....	21	2	52	.....	44	.....	2	.....
Kuring-gai .....	8	1	12	.....	16	.....	.....	.....
Auburn .....	.....	.....	1	.....	26	1	.....	.....
Bankstown .....	2	.....	6	.....	40	2	1	.....
Cabramatta and Canley Vale	1	.....	3	.....	2	.....	.....	.....
Dundas .....	3	.....	1	.....	12	.....	.....	.....
Ermington .....	1	.....	2	.....	3	.....	.....	.....
Granville .....	5	.....	5	.....	37	1	1	.....
Lidcombe .....	4	.....	7	.....	16	.....	.....	.....
Liverpool .....	3	.....	7	.....	24	1	.....	.....
Parramatta .....	9	.....	41	.....	42	3	.....	.....
Prospect and Sherwood .....	.....	.....	7	.....	20	4	.....	.....
Smithfield .....	.....	.....	5	.....	11	1	.....	.....
Hornsby S. (Ridings B & C)	5	.....	10	.....	14	.....	.....	.....
Warringah (Ridings B & C)	2	.....	10	.....	15	.....	.....	.....
Harbour of Port Jackson ...	11	.....	3	.....	7	.....	.....	.....
Total .....	663	45	1,830	5	2,280	65	64	.....
Death-rate per cent. ...	6·78		·27		2·85		.....	

RETURN showing the number of Cases and Deaths from Typhoid Fever, Scarlet Fever, and Diphtheria in the Hunter River Combined District, notified during the year 1914.

Districts.	Typhoid Fever.		Scarlet Fever.		Diphtheria.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
MUNICIPALITIES.						
Adamstown .....	3	.....	5	.....	6	.....
Carrington .....	3	.....	17	.....	5	.....
Greta .....	5	.....	.....	.....	.....	.....
Hamilton .....	8	.....	21	.....	18	.....
Lambton .....	7	.....	4	.....	1	.....
Maitland, East .....	16	.....	1	.....	1	.....
Maitland, West .....	8	2	5	.....	19	.....
Merewether .....	2	.....	33	.....	4	.....
Morpeth .....	.....	.....	.....	.....	4	.....
Newcastle .....	13	.....	31	.....	15	.....
New Lambton .....	1	.....	1	.....	3	.....
Plattsburg .....	10	.....	7	.....	.....	.....
Raymond Terrace .....	.....	.....	.....	.....	.....	.....
Singleton .....	11	.....	41	.....	10	.....
Stockton .....	.....	.....	7	.....	1	.....
Wallsend .....	14	1	9	.....	5	.....
Waratah .....	9	.....	11	.....	8	1
Wickham .....	5	.....	24	.....	30	.....
SHIRES.						
Bolwarra .....	1	.....	.....	.....	.....	.....
Cessnock .....	22	1	50	.....	25	.....
Lake Macquarie .....	9	.....	46	.....	8	1
Tarro .....	7	.....	10	.....	1	.....
Port Stephens .....	.....	.....	2	.....	4	.....
Harbour of Port Hunter .....	.....	.....	.....	.....	2	.....
Total .....	154	4	325	.....	170	2
Death-rate per cent. ....	2.59		Nil.		1.17	

RETURN showing the number of Cases and Deaths from Typhoid Fever, Scarlet Fever, and Diphtheria from Country Municipalities, notified during the year 1914.

Districts.	Typhoid Fever.		Scarlet Fever.		Diphtheria.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Aberdeen .....	.....	.....	1	.....	1	.....
Albury .....	4	2	2	.....	22	.....
Armidale .....	12	3	20	.....	63	2
Ballina .....	16	2	4	.....	20	.....
Balranald .....	2	.....	.....	.....	2	.....
Barraba .....	1	1	15	.....	5	.....
Bathurst .....	21	5	10	.....	44	5
Bega .....	1	.....	.....	.....	6	.....
Berry .....	1	.....	4	.....	7	.....
Bingara .....	1	1	.....	.....	.....	.....
Blayney .....	5	.....	2	.....	6	.....
Bombala .....	.....	.....	.....	.....	2	.....
Bourke .....	23	1	.....	.....	.....	.....
Bowral .....	.....	.....	.....	.....	2	.....
Braidwood .....	.....	.....	.....	.....	18	2
Brewarrina .....	1	.....	.....	.....	21	.....
Broken Hill .....	395	43	46	.....	588	21
Broughton Vale .....	.....	.....	.....	.....	.....	.....
Burrowa .....	.....	.....	.....	.....	13	.....
Camden .....	2	2	.....	.....	21	1
Campbelltown .....	.....	.....	.....	.....	5	1
Carcoar .....	1	.....	8	.....	4	.....
Casino .....	8	1	4	.....	13	.....
Castlereagh .....	.....	.....	.....	.....	.....	.....
Cobar .....	33	4	5	.....	45	.....
Condobolin .....	7	.....	8	.....	2	1
Cooma .....	1	.....	.....	.....	11	1
Coonamble .....	3	.....	54	1	2	.....
Cootamundra .....	2	.....	1	.....	7	.....
Coraki .....	.....	.....	1	.....	4	1
Corowa .....	.....	.....	.....	.....	2	.....
Cowra .....	3	.....	2	.....	6	.....
Cudal .....	.....	.....	.....	.....	3	.....
Cudgegong .....	.....	.....	.....	.....	.....	.....
Deniliquin .....	2	.....	.....	.....	3	.....
Dubbo .....	9	2	.....	.....	58	1
Dungog .....	4	.....	.....	.....	2	.....

RETURN showing the number of Cases, &c., from Country Municipalities—*continued*.

Districts.	Typhoid Fever.		Scarlet Fever		Diphtheria.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Forbes .....	55	1	2	.....	7	.....
Gerrington .....	.....	.....	1	.....	.....	.....
Glen Innes .....	9	1	38	.....	105	4
Goulburn .....	30	3	3	.....	112	2
Grafton .....	4	.....	37	.....	2	.....
Grafton South .....	6	.....	10	.....	5	.....
Grenfell .....	1	.....	.....	.....	5	1
Gulgong .....	.....	.....	10	.....	.....	.....
Gundagai .....	2	.....	.....	.....	1	.....
Gunnedah .....	5	.....	3	.....	14	.....
Hay .....	8	.....	43	.....	2	.....
Hillgrove .....	1	.....	10	.....	1	.....
Hillston .....	.....	.....	.....	.....	.....	.....
Illawarra (Central) .....	.....	.....	6	.....	3	.....
Illawarra (North).....	1	.....	6	.....	2	1
Ingleburn .....	.....	.....	.....	.....	.....	.....
Inverell .....	26	2	13	.....	57	.....
Jamberoo .....	2	.....	.....	.....	.....	.....
Jerilderie .....	2	.....	.....	.....	.....	.....
Junee .....	17	1	2	.....	117	1
Katoomba .....	1	.....	3	.....	16	.....
Kempsey .....	2	.....	3	.....	8	.....
Kiama .....	1	.....	4	.....	4	.....
Lismore .....	8	1	17	.....	15	2
Lithgow .....	22	2	14	.....	65	1
Maclean .....	.....	.....	5	.....	1	.....
Manilla .....	10	.....	3	.....	.....	.....
Mittagong .....	.....	.....	2	.....	1	.....
Moama .....	.....	.....	.....	.....	36	.....
Molong .....	1	.....	.....	.....	.....	.....
Moss Vale .....	.....	.....	.....	.....	7	.....
Moree .....	14	.....	1	.....	13	3
Moruya .....	.....	.....	.....	.....	.....	.....
Mudgee .....	4	.....	.....	.....	2	.....
Mulgoa .....	.....	.....	.....	.....	.....	.....
Mullumbimby .....	.....	.....	1	.....	.....	.....
Murrumburrah .....	.....	.....	.....	.....	.....	.....
Murrurundi .....	4	1	3	.....	.....	.....
Murwillumbah .....	6	.....	15	.....	32	.....
Muswellbrook .....	5	.....	1	.....	3	.....
Narrabri .....	18	4	.....	.....	38	1
Narrabri West .....	2	.....	4	.....	3	.....
Narrandera .....	5	2	.....	.....	17	.....
Narromine .....	2	.....	2	.....	7	.....
Nowra .....	.....	.....	1	.....	6	.....
Nyngan .....	.....	.....	1	.....	2	.....
Orange .....	65	2	13	.....	33	10
Orange East .....	.....	.....	.....	.....	1	.....
Parkes .....	9	1	.....	.....	16	.....
Peak Hill .....	2	.....	6	.....	1	.....
Penrith .....	3	.....	4	.....	7	1
Picton .....	.....	.....	3	.....	3	.....
Port Macquarie .....	1	.....	2	.....	1	1
Queanbeyan .....	2	.....	.....	.....	12	.....
Quirindi .....	5	.....	2	.....	7	.....
Richmond .....	5	.....	.....	.....	.....	.....
Scone .....	5	1	3	.....	5	.....
Shellharbour .....	1	.....	.....	.....	5	.....
Shoalhaven (South) .....	.....	.....	.....	.....	2	.....
St. Mary's .....	.....	.....	.....	.....	2	.....
Tamworth .....	32	1	26	.....	23	.....
Taree .....	1	.....	1	.....	.....	.....
Temora .....	10	.....	.....	.....	38	.....
Tenterfield .....	.....	.....	5	.....	4	.....
Tumut .....	2	.....	.....	.....	1	.....
Ulladulla .....	1	.....	1	.....	.....	.....
Umarra .....	.....	.....	1	.....	.....	.....
Uralla .....	2	.....	9	.....	1	.....
Wagga .....	3	1	.....	.....	41	3
Walcha .....	1	.....	5	.....	7	.....
Wallendbeen .....	.....	.....	.....	.....	1	.....
Wialda .....	1	.....	.....	.....	3	.....
Warren .....	.....	.....	.....	.....	2	.....
Wellington .....	26	2	14	.....	70	3
Wentworth .....	1	1	.....	.....	.....	.....
Wilcannia .....	.....	.....	.....	.....	.....	.....
Windsor .....	.....	.....	.....	.....	12	.....
Wingham .....	.....	.....	1	.....	.....	.....
Wollongong .....	1	.....	7	.....	15	2
Wrightville .....	1	.....	.....	.....	5	.....
Wyalong .....	4	1	9	.....	35	.....
Yass .....	22	3	1	.....	38	3
Young .....	3	.....	3	.....	4	.....
Total .....	1,041	97	567	1	2,112	75
Death-rate per cent. ....	9.31		.17		3.55	



RETURN showing the number of Cases and Deaths from Typhoid Fever, Scarlet Fever, and Diphtheria from Shires, notified during the year 1914.

Districts.	Typhoid Fever.		Scarlet Fever.		Diphtheria.	
	Cases	Deaths.	Cases.	Deaths.	Cases	Deaths.
Abererombie .....	3	1	1	.....	8	.....
Adjungbilly .....	3	.....	1	.....	.....	.....
Anaroo .....	1	.....	1	.....	12	1
Apsley .....	.....	.....	5	.....	12	.....
Ashford .....	.....	.....	.....	.....	1	.....
Bannockburn .....	3	.....	13	.....	9	.....
Barraba .....	.....	.....	1	.....	1	.....
Baulkham Hills .....	3	.....	4	.....	5	.....
Bellingen .....	1	.....	7	.....	15	2
Berrigan .....	1	.....	.....	.....	4	.....
Bibbenluke .....	1	.....	7	.....	14	1
Blacktown .....	.....	.....	7	.....	13	.....
Bland .....	16	1	47	.....	38	1
Blaxland .....	4	.....	2	.....	12	1
Blue Mountains .....	5	.....	5	.....	11	.....
Bogan .....	.....	.....	.....	.....	2	.....
Booolooroo .....	1	.....	1	.....	14	1
Boomi .....	.....	.....	.....	.....	.....	.....
Borec .....	8	.....	.....	.....	32	.....
Bulli .....	5	.....	14	.....	13	1
Burrangong .....	11	.....	1	.....	4	.....
Byron .....	2	.....	10	.....	4	.....
Cambewarra .....	2	.....	2	.....	1	.....
Canoblas .....	11	.....	2	.....	14	.....
Carrathool .....	1	.....	1	.....	.....	.....
Clyde .....	7	1	.....	.....	5	.....
Cobborah .....	1	.....	.....	.....	11	.....
Cockburn .....	1	.....	7	.....	3	.....
Collarenebri .....	.....	.....	.....	.....	.....	.....
Colo .....	1	.....	4	.....	1	.....
Conargo .....	.....	.....	.....	.....	.....	.....
Coolah .....	.....	.....	2	.....	4	.....
Coolamon .....	11	.....	1	.....	8	.....
Coonabarabran .....	.....	.....	23	.....	25	.....
Copmanhurst .....	1	.....	2	.....	3	.....
Coreen .....	4	.....	.....	.....	6	.....
Crookwell .....	1	.....	.....	.....	26	.....
Culcairn .....	4	.....	.....	.....	1	.....
Dalgety .....	1	.....	.....	.....	24	.....
Demondrille .....	.....	.....	.....	.....	1	.....
Dorrigo .....	2	.....	.....	.....	8	.....
Dumaresq .....	5	.....	4	.....	19	1
Erina .....	8	.....	17	.....	19	1
Eurobodalla .....	.....	.....	.....	.....	5	.....
Gadara .....	1	.....	1	.....	6	.....
Germanton .....	1	.....	.....	.....	3	.....
Gilgandra .....	4	.....	7	.....	77	.....
Gloucester .....	.....	.....	.....	.....	7	.....
Gobang .....	13	1	.....	.....	6	.....
Goodradigbee .....	13	.....	2	.....	14	.....
Gostwyck .....	.....	.....	19	.....	5	.....
Gundurimba .....	6	.....	10	.....	12	.....
Gunning .....	16	.....	.....	.....	16	1
Guyra .....	5	.....	14	.....	10	.....
Gwydir .....	.....	.....	1	.....	.....	.....
Harwood .....	.....	.....	5	.....	8	.....
Hastings .....	.....	.....	6	.....	6	1
Hornsby (Riding A) .....	.....	.....	3	.....	.....	.....
Hume .....	1	.....	.....	.....	8	.....
Illabo .....	.....	.....	.....	.....	7	.....
Imlay .....	1	.....	2	.....	.....	.....
Jemalong .....	6	.....	.....	.....	3	.....
Jindaloc .....	2	1	1	.....	1	.....
Kyeamba .....	2	1	.....	.....	12	.....
Kyogle .....	5	.....	12	.....	4	.....
Lachlan .....	1	.....	1	.....	.....	.....
Liverpool Plains .....	3	.....	2	.....	1	.....
Lockhart .....	4	.....	1	.....	12	.....
Lyndhurst .....	10	1	25	.....	39	.....
McIntyre .....	6	.....	.....	.....	7	.....
Macleay .....	2	.....	1	.....	11	.....
Macquarie .....	6	1	.....	.....	20	.....
Mandowa .....	5	1	5	.....	.....	.....
Manning .....	1	.....	8	.....	3	.....
Marthaguy .....	1	.....	.....	.....	5	.....
Meroo .....	.....	.....	.....	.....	1	1

RETURN showing the number of Cases, &c., from Shires--*continued*.

Districts.	Typhoid Fever.		Scarlet Fever.		Diphtheria.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Merriwa .....	.....	.....	.....	.....	14	.....
Mitchell .....	5	.....	1	.....	9	1
Monaro .....	7	1	2	.....	2	.....
Mulwaree .....	1	.....	.....	.....	12	.....
Mulbulla .....	.....	.....	.....	.....	15	.....
Murrungal .....	2	.....	.....	.....	7	1
Murray .....	.....	.....	.....	.....	10	.....
Murrumbidgee .....	.....	.....	.....	.....	.....	.....
Muswellbrook .....	1	.....	22	.....	6	.....
Namoi .....	16	2	4	.....	23	2
Narraburra .....	4	1	.....	.....	9	.....
Nattai .....	.....	.....	3	.....	4	.....
Nepean .....	1	.....	.....	.....	2	.....
Nundle .....	14	.....	2	.....	15	.....
Oberon .....	.....	.....	.....	.....	.....	.....
Orara .....	.....	.....	.....	.....	1	.....
Patrick's Plains .....	7	.....	24	.....	10	1
Peel .....	5	.....	3	.....	13	.....
Rylstone .....	.....	.....	.....	.....	.....	.....
Severn .....	6	.....	15	.....	41	.....
Stroud .....	2	.....	1	1	8	1
Sutherland .....	1	.....	6	.....	21	.....
Talbragar .....	2	.....	1	.....	20	1
Tallaganda .....	3	.....	2	.....	1	.....
Tamarang .....	2	.....	1	.....	15	.....
Tenterfield .....	.....	.....	5	.....	2	.....
Terania .....	.....	.....	1	.....	.....	.....
Timbrehongie .....	3	.....	4	.....	11	.....
Tintenbar .....	2	.....	20	.....	9	2
Tomki .....	2	.....	1	.....	9	.....
Tumbarumba .....	4	.....	1	.....	84	.....
Turon .....	3	.....	2	.....	9	.....
Tweed .....	2	.....	19	.....	22	.....
Urana .....	.....	.....	.....	.....	.....	.....
Wakool .....	4	.....	.....	.....	1	.....
Walgett .....	12	6	1	.....	.....	.....
Wallarobba .....	.....	.....	6	.....	2	.....
Waradgery .....	3	.....	1	.....	.....	.....
Warrah .....	5	.....	4	.....	2	.....
Warringham .....	.....	.....	.....	.....	.....	.....
Waugoola .....	1	.....	2	.....	12	.....
Weddin .....	3	1	1	.....	7	1
Winduran .....	.....	.....	.....	.....	.....	.....
Wingadee .....	4	1	3	.....	3	.....
Wingecarribee .....	2	.....	.....	.....	3	.....
Wollondilly .....	7	.....	.....	.....	13	.....
Woodburn .....	2	.....	3	.....	3	.....
Woolooma .....	1	.....	4	.....	8	.....
Wunnumurra .....	.....	.....	.....	.....	.....	.....
Wyaldra .....	.....	.....	2	.....	.....	.....
Yallaroï .....	.....	.....	.....	.....	.....	.....
Yanko .....	9	.....	.....	.....	30	3
Yarrolmmla .....	.....	.....	.....	.....	3	.....
Total .....	391	21	485	1	1,193	27
Death-rate per cent. ....	5·37		·20		2·26	

RETURN showing the Cases and Deaths from Typhoid Fever, Scarlet Fever, and Diphtheria from the Police Districts of New South Wales, notified during the year 1914.

Districts.	Typhoid Fever.		Scarlet Fever.		Diphtheria.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Balranald .....	.....	.....	.....	.....	.....	.....
Bourke .....	1	.....	.....	.....	.....	.....
Brewarrina .....	.....	.....	.....	.....	1	.....
Broken Hill .....	.....	.....	.....	.....	.....	.....
Cobar .....	6	.....	.....	.....	24	.....
Hillston .....	.....	.....	.....	.....	.....	.....
Mitchell .....	9	.....	.....	.....	37	.....
Walgett .....	5	.....	.....	.....	35	1
Wilcannia .....	14	.....	.....	.....	.....	.....
Total .....	35	.....	.....	.....	97	1
Death-rate per cent. ....	Nil.		Nil.		1·03	

NOTIFIED Typhoid Fever, Scarlet Fever, and Diphtheria. Table showing age and sex, incidence and mortality in the Metropolitan Combined Sanitary District, Hunter River Combined District, and remainder of State during 1914.

Age Period.	Typhoid Fever.						Scarlet Fever.						Diphtheria.					
	Incidence.			Mortality.			Incidence.			Mortality.			Incidence.			Mortality.		
	Notified Cases.			Notified Deaths.			Notified Cases.			Notified Deaths.			Notified Cases.			Notified Deaths.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.

## METROPOLITAN COMBINED SANITARY DISTRICT.

All ages.....	380	283	663	24	21	45	710	1,120	1,830	2	3	5	959	1,321	2,280	22	43	65
6 months .....	..	..	..	..	..	..	4	3	7	..	..	..	6	6	12	1	..	1
1 year .....	..	1	1	..	..	..	20	28	48	..	..	..	46	50	96	5	9	14
2 years .....	2	..	2	..	..	..	42	44	86	1	1	2	90	87	177	6	9	15
3 " .....	2	3	5	..	..	..	57	66	123	..	..	..	95	90	185	3	4	7
4 " .....	3	4	7	..	..	..	59	73	132	..	..	..	107	102	209	4	7	11
5 " .....	4	3	7	..	..	..	67	110	177	..	..	..	92	108	200	..	5	5
Total 5 " .....	11	11	22	..	..	..	249	324	573	1	1	2	436	443	879	19	34	53
10 " .....	38	42	80	3	1	4	300	493	793	1	2	3	260	398	658	2	9	11
15 " .....	37	46	83	2	3	5	92	173	265	..	..	..	78	155	233	..	..	..
20 " .....	58	42	100	1	5	6	29	37	66	..	..	..	60	72	132	..	..	..
25 " .....	85	47	132	8	6	14	14	37	51	..	..	..	40	94	134	..	..	..
35 " .....	88	54	142	7	4	11	13	24	37	..	..	..	55	91	146	..	..	..
45 " .....	33	25	58	3	1	4	4	7	11	..	..	..	10	31	41	..	..	..
55 " .....	19	9	28	..	1	1	1	1	2	..	..	..	7	12	19	1	..	1
Over 55 " .....	6	2	8	..	..	..	..	..	..	..	..	..	2	6	8	..	..	..
Age not stated .....	5	5	10	..	..	..	8	24	32	..	..	..	11	19	30	..	..	..

## HUNTER RIVER COMBINED DISTRICT.

All ages.....	103	51	154	3	1	4	104	221	325	..	..	..	86	84	170	1	1	2
6 months .....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..
1 year .....	..	1	1	..	..	..	7	9	16	..	..	..	8	7	15	..	..	..
2 years .....	..	..	..	..	..	..	6	7	13	..	..	..	14	9	23	..	..	..
3 " .....	3	1	4	..	..	..	6	16	22	..	..	..	8	6	14	..	..	..
4 " .....	3	1	4	..	..	..	10	24	34	..	..	..	11	7	18	..	1	1
5 " .....	16	9	25	..	..	..	17	14	31	..	..	..	11	6	17	1	..	1
Total 5 " .....	22	12	34	..	..	..	46	70	116	..	..	..	53	35	88	1	1	2
10 " .....	14	15	29	..	..	..	36	92	128	..	..	..	20	22	42	..	..	..
15 " .....	15	6	21	..	..	..	12	40	52	..	..	..	6	9	15	..	..	..
20 " .....	16	2	18	..	..	..	..	6	6	..	..	..	2	6	8	..	..	..
25 " .....	16	7	23	..	..	..	2	5	7	..	..	..	1	3	4	..	..	..
35 " .....	15	4	19	3	1	4	6	5	11	..	..	..	1	5	6	..	..	..
45 " .....	2	5	7	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..
55 " .....	2	..	2	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..
Over 55 " .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Age not stated .....	1	..	1	..	..	..	2	3	5	..	..	..	2	3	5	..	..	..

## REMAINDER OF STATE.

All ages.....	919	548	1,467	77	41	118	391	661	1,052	..	1	1	1,476	1,926	3,402	51	52	103
6 months .....	..	..	..	..	..	..	4	4	8	..	..	..	5	3	8	1	..	1
1 year .....	4	..	4	..	..	..	12	13	25	..	..	..	61	44	105	2	5	7
2 years .....	7	7	14	..	..	..	24	22	46	..	..	..	90	86	176	4	3	7
3 " .....	9	14	23	..	1	1	32	50	82	..	..	..	123	122	245	4	3	7
4 " .....	28	11	39	1	..	1	34	42	76	..	..	..	100	117	217	5	2	7
5 " .....	66	39	105	..	..	..	34	49	83	..	..	..	117	112	229	4	3	7
Total 5 " .....	114	71	185	1	1	2	140	180	320	..	..	..	496	484	980	20	16	36
10 " .....	106	99	205	4	3	7	150	267	417	..	1	1	461	558	1,019	16	17	33
15 " .....	110	85	195	13	7	20	59	122	181	..	..	..	170	320	490	6	10	16
20 " .....	119	80	199	18	5	23	16	28	44	..	..	..	98	177	275	5	5	10
25 " .....	165	92	257	12	13	25	3	9	12	..	..	..	99	112	211	2	3	5
35 " .....	160	66	226	16	4	20	9	29	38	..	..	..	74	156	230	1	1	2
45 " .....	70	19	89	4	7	11	5	7	12	..	..	..	28	60	88	..	..	..
55 " .....	25	8	33	5	1	6	1	..	1	..	..	..	4	8	12	..	..	..
Over 55 " .....	21	6	27	2	..	2	..	2	..	..	..	..	1	5	6	1	..	1
Age not stated .....	29	22	51	2	..	2	8	17	25	..	..	..	45	46	91	..	..	..



TABLE showing the seasonable prevalence of Typhoid Fever, Scarlet Fever, Diphtheria, and Infantile Paralysis in New South Wales during 1914:—

Month, 1914.	Typhoid Fever.				Scarlet Fever.				Diphtheria.				Infantile Paralysis.			
	Metropolitan Combined Districts.		Hunter River Combined Districts.		Remainder of State.		Total.		Metropolitan Combined Districts.		Hunter River Combined Districts.		Metropolitan Combined Districts.		Hunter River Combined Districts.	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
January ..	67	4	21	...	111	9	199	13	48	...	10	...	68	...	...	...
February ..	78	9	6	...	82	13	166	22	76	...	14	...	41	...	...	...
March ..	73	8	35	...	341	15	449	23	118	...	36	...	133	...	...	...
April ..	103	4	15	...	174	11	292	15	104	...	38	...	110	...	...	...
May ..	92	9	15	...	199	15	306	24	193	...	22	...	96	...	...	...
June ..	46	3	9	...	148	8	203	13	203	...	29	...	96	...	...	...
July ..	33	4	4	...	50	11	87	16	197	...	36	...	84	...	...	...
August ..	22	2	10	...	41	3	73	5	185	...	40	...	105	...	...	...
September ..	20	...	...	...	31	7	51	7	160	...	23	...	84	...	...	...
October ..	31	...	3	...	45	7	79	7	154	...	17	...	73	...	...	...
November ..	24	...	3	...	86	5	113	5	172	...	24	...	62	...	...	...
December ..	74	2	33	...	159	14	266	17	220	...	36	...	100	...	...	...
Totals ..	663	45	154	4	1,467	118	2,334	167	1,830	5	325	...	1,052	1	3,207	6
Case—Fatality per cent. ...	6.78	2.59	8.04	7.31	.27	Nil.	.09	.18	2.85	1.17	3.02	2.91	Nil.	7.69	1.26	1.26

TABLE showing Incidence of Typhoid Fever, Scarlet Fever, and Diphtheria in the Metropolitan Combined District during the year 1914.

1914.	Typhoid Fever.		Scarlet Fever.		Diphtheria.	
	Metropolitan Combined District.	Metropolitan District only.	Metropolitan Combined District.	Metropolitan District only.	Metropolitan Combined District.	Metropolitan District only.
January .....	67	59	48	43	173	147
February.....	78	71	76	72	196	178
March .....	73	68	118	116	224	205
April .....	103	100	104	99	278	251
May .....	92	89	193	183	333	277
June.....	46	44	203	190	242	218
July .....	33	29	197	187	201	179
August.....	22	19	185	172	158	133
September .....	20	18	160	148	96	85
October .....	31	28	154	143	94	84
November .....	24	21	172	156	101	92
December .....	74	64	220	201	184	146
Total.....	663	610	1,830	1,710	2,280	1,995

Diagrams are appended showing the monthly incidence of Typhoid Fever, Scarlet Fever, and Diphtheria throughout 1914.

Diagram showing the Monthly Numbers of Notifications of Infectious Diseases in the Metropolis during 1914.







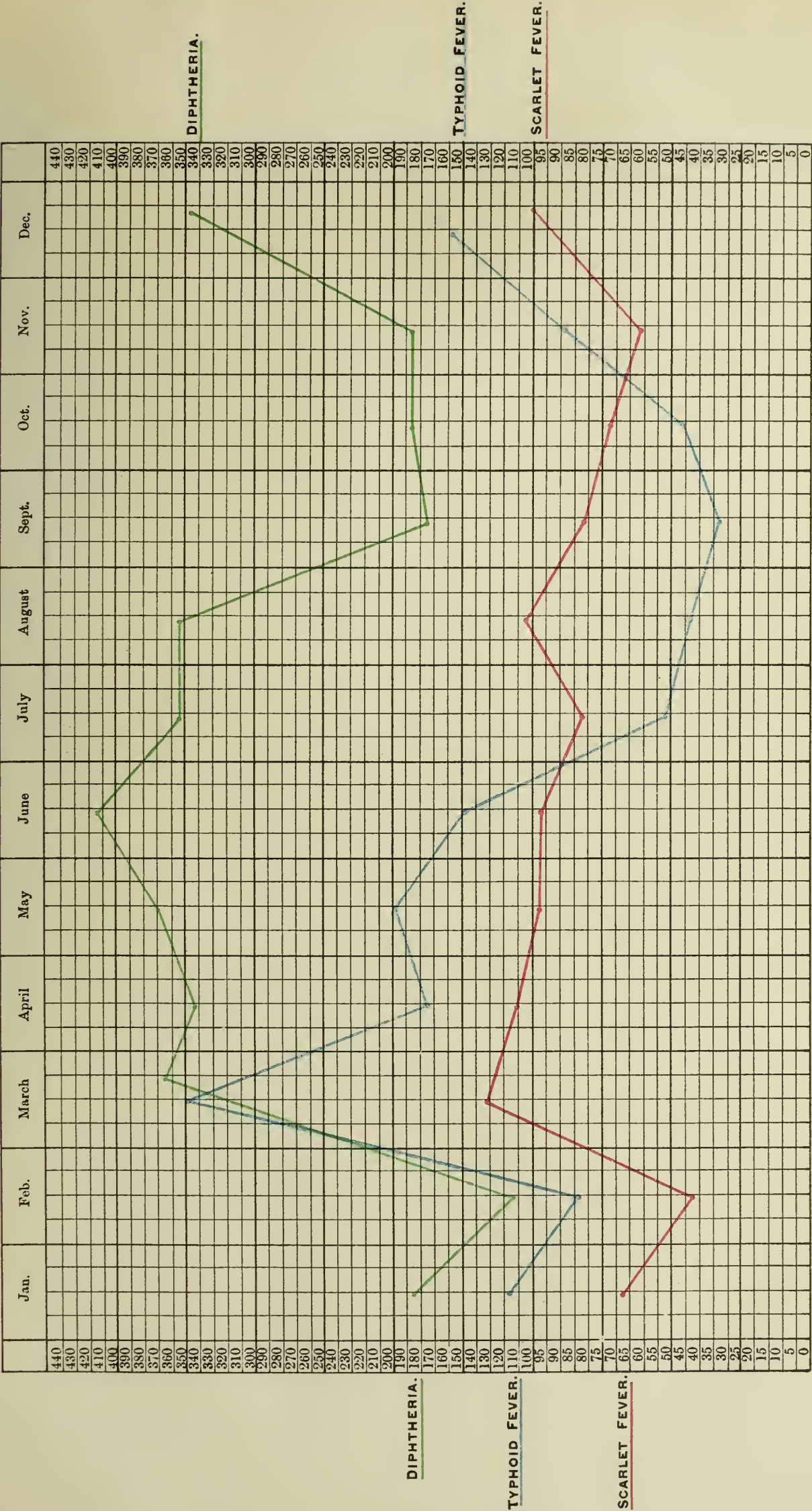
Diagram showing the Monthly Numbers of Notifications of Infectious Diseases in the  
Hunter River Combined District during 1914.







Diagram showing the Monthly Numbers of Notifications of Infectious Diseases in the  
Remainder of State during 1914.





## HOSPITAL ADMISSION DEPÔT.

*Medical Staff:*

Dr. ARTHUR PALMER, First Government Officer for Sydney.

Dr. A. C. CAHILL, Second Government Officer for Sydney.

AMONG the varied calls made upon Dr. Cahill and myself the following branches of work call for special reference :—

*Hospital Admission Depôt.*—The Government Medical Officers attended each morning from 9 to 12.30 to carry out examinations of indigent sick persons who were seeking admission to the various hospitals and institutions, and when necessary the destitute sick were visited in their own homes before being transferred to a hospital. Some idea of the volume of the work may be gathered from the following figures :—In 1914 the number of persons applying at this Depôt for admission to hospitals and asylums was 12,761 ; of these, 2,907 were sent to the Coast Hospital, 237 to Sydney Hospital, 192 to the Royal Prince Alfred Hospital, and 150 to the Women's Hospital ; 89 persons were removed to the Hospice for the Dying ; and 6,540 persons were admitted to the various State Hospitals and Asylums. Orders for outdoor treatment were issued to 2,069 patients, and 115 were sent to Convalescent hospitals. Of the 12,761 persons referred to above, 6,139 were born in New South Wales ; 3,757 had been in the State for more than twenty years ; 469 between ten and twenty years ; and 451 between five and ten years ; 1,371 persons stated that they had been here between one and five years, while 571 had been less than twelve months in the State. Of the latter, 143 had less than one month's residence. Arranged in 10-year age-groups, the greatest number of applicants amongst the 12,761 claimed to be over 60, namely 2,734 ; 2,152 were between 50 and 60 ; 1,878 between 40 and 50 ; 1,785 between 30 and 40 ; 2,165 between 20 and 30 ; 736 between 10 and 20 ; 645 between 5 and 10 ; and 666 were under 5 years.

Of the 12,761, those born in Australasia numbered 7,164, distributed as follows :—New South Wales, 6,139 ; Victoria, 479 ; Queensland, 149 ; New Zealand, 199 ; South Australia, 74 ; Tasmania, 124 ; Western Australia was not represented. Other countries were England, 2,777 ; Scotland, 759 ; Ireland, 1,298 ; France, 70 ; Germany, 139 ; Italy, 22 ; Norway, Sweden, and Denmark, 228 ; other Europeans, 77 ; India, 20 ; China, 20 ; other Asiatics, 30 ; United States of America, 83 ; Canada, 34 ; and Africa, 15.

The occupations comprised labourers, 3,882 ; married women and domestics, 1,827 ; seamen, 463 ; cooks, bakers, &c., 363 ; miners, 320 ; clerks, 249 ; carters, 211 ; carpenters, 152 ; painters, 111 ; gardeners, 95 ; bricklayers and brickmakers, 57 ; quarrymen, 66 ; blacksmiths, 63 ; printers, 61 ; tailors, 70 ; bootmakers, 87 ; dealers, 81 ; butchers, 40 ; while 4,505 are given as no occupation.

In addition, examinations were made of candidates for appointment to the Public Service. Any special medical examinations required in connection with public servants were also undertaken by us.

Medical examinations required for the purpose of the Factories Act were also made. During 1914 these numbered 2,358, the majority of the examinees being young persons seeking age-exemption certificates or permits to work at certain trades.

Vaccinations were also carried out daily at this Depôt.

*City Coroner.*—In the course of the year 243 bodies were examined for the City Coroner and evidence given at the Coroner's Court in connection with 85 of these. In addition, evidence was subsequently given at the Criminal Court in connection with some of the above examinations.

*Medico-Legal.*—Examinations were made in twenty-four instances in cases of alleged rape and indecent assault, &c., and where necessary, evidence was subsequently given at the Children's and other Courts to assist the Crown Law Officers. All medico-legal cases pass through the hands of the Government Medical Officers before being sent on to the Government Analyst, the Microbiological Laboratory, or other Departments for further examination.

*Police Department.*—605 candidates for the Police Force were examined. Of these, 357 were successful. 137 probationers were re-examined at the end of twelve months' service ; of these 132 passed into the Force as fit.

In addition, any Police on the sick list were seen each day at the office of the Inspector-General of Police. There was an average daily sick list of 20 to 23.

*Prisons Department.*—Until the closing of Darlinghurst Gaol in August, 1914, daily attendances were made for the purpose of examining and attending sick prisoners. Since the prisoners were removed, the Long Bay Penitentiary has been visited from time to time for the purpose of certifying lunatics, or for examining prisoners for the purpose of subsequently giving evidence at the Courts. For some time past arrangements have been made whereby all prisoners charged with capital offences, or with any serious offence where the question of insanity may arise, are brought before the Government Medical Officers for examination as soon as possible after arrest.

*Lunacy Cases.*—The Reception House at Darlinghurst was visited daily, and during the year 627 patients were certified insane.

*Miners' Accident Relief Board.*—The meetings of this Board were attended for the purpose of assisting in every way with advice, and special examinations were carried out for the Board as required.

*Navigation*



*Navigation Department.*—The Government Medical Officers also examine the harbour and sea pilots of the port of Sydney.

*Claims for Injuries, Hospitals Disputes, &c.*—In accident cases where the Government has been sued, the patients have been examined, usually in consultation with their own medical advisers, and reports made.

From time to time country centres were visited in connection with accident cases, or to hold investigations in connection with hospital disputes, &c.

#### MOTOR AMBULANCE SERVICE.

Statements are appended relative to the work of the Motor Ambulances attached to the Hospital Admission Dépôt, and the Disinfecting station at Woolloomooloo Bay.

The ambulance service is an important adjunct of the Hospital Admission Dépôt. Until 1912 this service was conducted with the horse ambulances attached to the Coast Hospital, one of which was stationed at the Dépôt for the purpose of removing city patients to the central hospitals. Since July, 1912, motor ambulances have been utilised, and have proved of the utmost service, as they can be used daily for conveying patients not only to the central hospitals, but also to the Coast Hospital, a distance of 9 miles from the city. The great utility of the motor ambulance as compared with the horse ambulance is shown by the fact that in the six months, January to June, 1914, 369 journeys were made to the Coast Hospital by motor ambulance as against 45 by the horse ambulance in the six months January to June, 1913. The comparison for the six months is as follows:—

Period.	Vehicle.	No. of Journeys.	Mileage travelled.	Time occupied.
January-June, 1913 .....	Horse ambulance .....	346	2,040	512
January-June, 1914 .....	Motor ambulance .....	747	6,053	798

A statement is appended showing the work performed by Nos. 1 and 2 motor ambulances during 1914.

Hospital or Institution, etc.	No. of Patients Removed.													Total.
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.		
Benevolent Asylum .....	1	...	...	...	...	...	...	...	...	...	...	...	1	
Coast Hospital .....	110	113	74	85	124	141	162	138	83	88	84	76	1,278	
Long Bay Penitentiary.....	...	...	...	...	...	...	1	...	...	...	...	...	1	
Marrickville Cottage Hospital .....	1	2	...	...	...	...	1	...	...	...	...	1	5	
Mater Misericordiae Hospital .....	...	...	...	...	...	...	...	...	...	...	...	1	1	
Newington boat .....	10	21	...	16	11	16	10	3	6	10	8	...	111	
Quarantine Depot .....	27	32	6	5	28	1	2	1	34	111	30	13	290	
Railway Station .....	10	2	6	5	6	8	9	8	2	11	...	4	71	
Reception House .....	2	2	...	...	1	2	2	2	2	...	...	1	14	
Rookwood State Hospital .....	23	19	12	9	14	14	19	4	12	5	3	10	144	
Royal Alexandria Hospital for Children .....	5	1	3	...	2	2	2	1	3	...	...	4	23	
Royal North Shore Hospital .....	1	...	...	...	...	...	...	...	...	...	...	...	1	
Royal Prince Alfred Hospital.....	6	11	3	2	8	7	6	9	2	6	2	5	67	
Royal Hospital for Women.....	8	1	3	1	2	1	3	4	...	1	4	2	30	
South Sydney Hospital .....	1	4	3	1	1	...	2	...	...	2	...	...	14	
South Sydney Women's Hospital .....	...	7	1	...	...	...	...	1	...	1	...	...	10	
St. Margaret's Hospital .....	...	...	1	...	...	...	...	...	...	...	...	...	1	
St. Vincent's Hospice .....	10	6	5	4	4	6	9	14	3	...	...	1	62	
St. Vincent's Hospital .....	...	...	...	...	...	1	...	...	...	...	...	...	1	
Sydney Hospital .....	18	16	7	6	15	20	9	9	11	14	7	9	141	
Western Suburbs Cottage Hospital .....	2	...	...	...	...	...	...	...	...	...	...	...	2	
Women's Hospital, Crown-street .....	...	1	...	1	...	...	...	1	...	...	1	1	5	
Removal of Patients to their homes ...	4	14	10	15	35	24	28	4	7	4	8	4	157	
Refused removal.....	2	...	3	8	2	14	12	3	3	6	1	5	59	
Total .....	241	252	142	158	253	257	277	202	168	259	148	137	2,494	

#### SUMMARY.

Year, 1914.	No. of Patients removed.	Miles travelled.	Hours occupied.
Ambulance No. 1 .....	1,034	9,269	1,260 $\frac{3}{4}$
Ambulance No. 2 .....	1,460	12,850	1,665
Total .....	2,494	22,119	2,925 $\frac{3}{4}$

The Disinfecting and Fumigating Station at Woolloomooloo Bay is also utilised in connection with the Hospital Admission Dépôt. The ambulances, cabs, &c., are sent there for disinfection after removal of patients suffering from infectious disease; and infected clothing and bedding is treated there. In 1914 125 cabs, exclusive of Government vehicles, were disinfected there, and 625 parcels of clothing and bedding from premises in which smallpox has occurred. Assistance was also rendered to the military authorities in the matter of disinfection, 1,024 blankets, 200 overcoats, 200 tunics, 200 trouse, 100 sing ets ents being treated.

ARTHUR PALMER,  
First Government Medical Officer for Sydney.

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PART II.

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1.—Metropolitan Combined Sanitary Districts.

Report of the Acting Medical Officer of Health (Dr. F. M. SUCKLING) for 1914.

2.—Hunter River Combined Sanitary Districts.

Report of the Acting Medical Officer of Health (Dr. J. BOOTH-CLARKSON) for 1914.

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## PART II.

## I.—Metropolitan Combined Sanitary Districts.

## Report of the Acting Medical Officer of Health for the Year 1914.

F. M. Suckling, M.B., Ch.M., D.P.H. (Syd.), D.T.M. & H. (Camb.), to the Local Sanitary Authorities of the Metropolitan Combined Districts of Sydney.

Queen Victoria Markets (opposite Town Hall), Sydney, 1 August, 1915.

Gentlemen,

I have the honor to present the Report on the conditions as to health of the sanitary districts of the Metropolis of Sydney for the year 1914.

I tender my apologies for the delay in submission of this Report and its incomplete character, which are due to disorganisation in Government Departments occasioned by the great European war now in progress. As a result of this upheaval, Dr. Purdy, Medical Officer of Health for Sydney, volunteered, and was accepted for military service abroad, so that at short notice his duties were temporarily undertaken by me towards the close of the year.

The health experience of Sydney, as gauged by morbidity and mortality returns for the year 1914, may be considered satisfactory, the death rate (9·80 per 1,000), being low for a city with a population of three-quarters of a million. The rate is below that of the previous year (10·75 per 1,000).

The deaths of children under 1 year of age within the Metropolitan area totalled 1,539, or 68 per 1,000 births in the Metropolis proper, which is gratifying, being considerably below that of the previous year (77·5 per 1,000 births).

The epidemic of smallpox, which began in Sydney in 1913, still persisted throughout the year 1914, and retained its former mild features. Four hundred and forty-five cases were reported in the Metropolitan area during the current year, and 2 deaths were recorded of patients who had contracted smallpox, but who were primarily suffering from cancer and chronic nephritis, respectively. The decrease in the number of cases was no doubt due to the immunity conferred on a considerable proportion of the population by vaccination performed during the previous year.

Diphtheria continued to be prevalent, no less than 2,011 cases being notified in the Metropolitan area, of which 95 died. Of the other notifiable diseases, a great increase occurred in the number of cases of scarlet fever recorded, there being notified 1,717 cases, as compared with 555 of the previous year.

The incidence of typhoid fever was about the average of previous years.

For the fifth year in succession no case of plague was reported.

Although whooping cough has been prevalent in the Metropolis during the past four years, still it was less so in 1914 than in 1913, only 48 deaths being recorded, as compared with 122 of the previous year.

Influenza was less prevalent than in previous years.

## POPULATION.

The district included within the Metropolitan Combined Sanitary Districts—following the practice of previous reports—is considered under 3 heads:—

1. Sydney and suburbs, which includes the City of Sydney and 40 suburban municipalities, and 1 shire (Kuring-gai).
2. The extra Metropolitan municipalities: Auburn, Bankstown, Cabramatta and Canley Vale, Dundas, Ermington and Rydalmere, Granville, Lidcombe, Liverpool, Parramatta, Prospect and Sherwood, Smithfield and Fairfield.
3. The shires of Warringah and Hornsby (Ridings B and C only in each shire).

The shires of Warringah and Hornsby are not dealt with statistically, and the extra Metropolitan municipalities are separately treated from the metropolis statistically. The population of the metropolis proper (Sydney and suburbs), was estimated by the Government Statistician to be 752,500 on December 31st, 1914, of which the City contained 110,700, and the suburbs (including Kuring-gai shire), 641,800. The City population decreased by 5,200, no doubt due to City improvement schemes, necessitating the demolition of a number of dwellings, whilst the suburban population increased by 32,300.

The mean population of the year was estimated by the Statistician to be 741,200.

In this Report the estimated population figures have only been departed from in the two instances of the municipalities of Hunter's Hill and Leichhardt, since each contains large mental hospitals. As in previous reports, deaths among the inmates of these hospitals have been distributed to the districts in which they had previously resided, and, accordingly, it was necessary to exclude such inmates from the estimate of the population. The hospitals in question were Gladesville (1,211 inmates), and Callan Park 998 inmates).

## BIRTHS.



## BIRTHS.

According to the Government Statistician the number of births registered in the Metropolis during the year was 20,821, or 286 more than in 1913. The number of births is the highest ever recorded in the Metropolis, and is equivalent to a birth-rate of 28·09 per 1,000 of the population. This rate, which is 0·9 per cent. above the average of the preceding five years, is below that of 1912 and 1913, but with such exceptions is the highest since 1895.

The number of illegitimate children born was 1,488 or 6·95 per cent. of the total births, and equivalent to 1·95 per 1,000 of the population. Of these children 59·7 per cent. were born in public institutions. It is interesting to observe that the percentage of illegitimacy is still decreasing.

## DEATHS.

The recorded deaths of residents in the Metropolis proper numbered 7,266, which is 374 less than those recorded in the year 1913. The corresponding death rate was 9·80 per 1,000 of the estimated mean population of the year. These figures do not include deaths of former residents of the Metropolis which occurred in the Benevolent Asylums of Liverpool, Parramatta, Rookwood, and Newington. As previously pointed out in former reports, it has been found to be impossible to obtain correct addresses of the deceased inmates before they enter these institutions, nevertheless, such deaths cannot be entirely neglected in the estimation of mortality figures since some proportion of these inmates formerly resided in Sydney and suburbs.

It is considered, however, possible to make due corrections for deaths of Metropolitan residents in institutions by multiplying the number of recorded deaths of residents by a factor obtained by dividing the total deaths in New South Wales by the total deaths less institution deaths.

The recorded death rate for the Metropolis, when thus corrected for institutional deaths, becomes increased from 9·80, as given above, to 10·50 per 1,000.

For individual diseases the requisite correction is more complicated, and has not been applied except with regard to Pulmonary consumption (for which see under the heading of Tuberculosis).

Diseases of the heart and blood vessels (including cerebral hæmorrhage) accounted for 1,289 deaths in 1914, which is an increase of 215 deaths on the number recorded in 1913. Cancer caused 647 deaths, pneumonia 489, and diarrhœal diseases 667 deaths. Whooping-cough shows a decreased mortality, there having been 48 deaths from this disease in the Metropolis as compared with 122 deaths in the year 1913. Influenza was responsible for only 10 deaths.

Of the other epidemic disease, typhoid fever caused 82 deaths; measles 3; scarlet fever 16; diphtheria 95; erysipelas 6; of these typhoid fever and scarlet fever showed increases.

The recorded number of deaths from certain diseases will be found given in various tables in this report, and especially in table No. 14. In some cases the figures differ from those supplied by the Government Statistician for the reasons enumerated above.

An examination of Table 1 shows that the highest death rate from all causes in the Metropolis was experienced in the Municipality of Hunter's Hill where 26·06 deaths per 1,000 were recorded. Among municipalities with more than 10,000 residents, Leichhardt with 12·76 deaths per 1,000, the City of Sydney (12·07) and Redfern (12·01) had the highest general death rates. To Concord with a population of 5,690 and a density of 2·1 per acre and Drummoyne with a population of 12,350 and a density of 6·4 per acre credited the lowest death rates, 4·74 and 6·07 per 1,000 respectively. Of the extra Metropolitan districts Parramatta and Auburn experienced the highest death rates, 18·49 and 11·61 per 1,000 respectively, whilst Bankstown and Dundas had the lowest, 3·53 and 5·11 respectively.

TABLE 1.

SHOWING Population, density of Population, and certain Death-rates in the Municipalities of the Metropolitan Combined Sanitary Districts for 1914, including deaths which have occurred in General Hospitals, Special Hospitals for Consumption, and Mental Hospitals. Deaths in Hospitals have been distributed to their proper districts before calculating these rates.

District.	Estimated Mean Population.	Density of Population to the Acre.	Death-rates per 1,000 of Population.					Infantile Death-rate per 1,000 Births.
			All Causes.	Diarrhœal Diseases, including Enteritis.	Principal Zymotic Diseases except Diarrhœa.	Phthisis.	All Tubercular Diseases.	
City of Sydney .....	113,300	39·2	12·27	·89	·25	·72	·89	73
Alexandria .....	11,370	11·1	8·80	·97	·18	·53	·70	44
Annandale .....	12,430	34·5	10·14	1·13	·40	·80	1·13	78
Ashfield .....	26,120	12·6	8·35	·38	·27	·38	·61	55
Balmain .....	33,590	35·8	10·81	·95	·33	·54	·65	90
Bexley .....	9,400	4·9	6·81	·53	·53	·53	·64	64
Botany .....	5,470	2·5	7·86	1·28	...	...	·36	78
Burwood .....	11,650	11·1	9·52	·51	·51	·34	·34	52
Canterbury .....	21,110	2·5	8·38	·52	·37	·52	·57	59
Concord .....	5,690	2·1	4·74	...	·35	·35	·52	32
Darlington .....	3,920	89·1	7·50	·51	...	·76	1·02	96
Drummoyne .....	12,350	6·4	6·07	·32	·24	·16	·16	85
Eastwood .....	1,260	0·4	10·31	...	1·59	·79	·79	...
Enfield .....	4,980	2·9	9·43	·80	·40	...	...	77
Erskineville .....	7,770	43·8	10·94	1·67	1·02	·64	·77	74
Glebe .....	23,020	41·2	8·56	·83	·39	·70	·83	57

TABLE 1—continued.

District.	Estimated Mean Population.	Density of Population to the Area.	Death-rates per 1,000 of Population.					Infantile Death-rate per 1,000 Births.
			All causes.	Diarrhoeal Diseases, including Enteritis.	Principal Zymotic Diseases except Diarrhoea.	Phthisis.	All Tubercular Diseases.	
Homebush .....	980	1.5	12.24	1.02	1.02	2.04	2.04	26
Hunter's Hill .....	4,199	4.1	26.06	.55	.37	1.10	1.30	...
Hurstville .....	9,580	1.4	10.65	1.67	.94	.63	.84	92
Kogarah .....	11,150	2.5	8.25	.90	.80	.09	.36	63
Lane Cove .....	4,420	1.8	8.14	.90	...	.23	.23	111
Leichhardt .....	26,422	23.6	12.76	.95	.47	1.06	1.13	75
Manly .....	13,200	5.4	10.60	1.31	.38	.23	.38	70
Marriekville .....	36,110	17.9	8.66	.86	.28	.42	.55	56
Mascot .....	7,950	3.5	9.05	1.76	.63	.25	.63	87
Mosman .....	16,400	7.9	7.01	.18	.06	.12	.12	52
Newtown .....	28,080	63.5	9.58	1.18	.28	.61	.64	79
North Sydney .....	40,070	19.4	8.61	.55	.25	.40	.47	65
Paddington .....	26,170	64.9	10.70	.84	.23	.53	.65	49
Petersham .....	23,910	19.0	9.16	.59	.25	.46	.54	79
Randwick .....	29,270	3.6	8.95	.61	.44	.61	.71	71
Redfern .....	25,330	58.3	12.01	1.38	.35	1.02	1.18	100
Rockdale .....	18,580	3.7	8.56	1.18	.32	.22	.22	83
Ryde .....	7,930	1.1	6.43	.38	1.00	.25	.38	71
St. Peters .....	10,340	11.5	10.06	1.16	.48	.48	.58	93
Strathfield .....	5,140	2.9	9.92	.39	.39	.58	.58	69
Vaucluse .....	2,190	2.9	16.44	4.57	...	.91	1.37	341
Waterloo .....	11,180	13.9	11.49	2.15	.18	.45	.45	87
Waverley .....	25,730	13.1	9.09	.62	.43	.47	.58	61
Willoughby .....	18,800	3.4	7.23	.85	.11	.74	.80	50
Woollahra .....	19,580	10.2	8.20	.53	.16	.43	.48	61
Shire of Kuring-gai .....	12,800	0.6	7.42	.08	.47	1.09	1.17	48
Whole Metropolis .....	741,200	6.3	9.80	.84	.33	.56	.68	68
Auburn .....	9,300	3.5	11.61	1.18	.32	.75	.86	89
Bankstown .....	4,250	0.2	3.53	...	...	.71	.71	8
Cabramatta and Canley Vale .....	1,340	0.2	8.21	...	...	.75	.75	73
Dundas .....	1,370	0.5	5.11	.73	...	...	...	83
Ermington and Rydalmere .....	1,750	0.9	6.57	4.00	2.29	3.43	4.57	167
Granville .....	9,950	2.4	7.34	.70	.20	.50	.60	65
Liverpool .....	3,950	0.09	8.61	.25	.25	.76	1.01	77
Lidcombe .....	6,650	1.2	6.47	.60	.15	.60	.60	43
Parramatta .....	12,600	5.7	18.49	.63	1.27	1.27	1.43	60
Prospect and Sherwood .....	4,370	0.6	9.38	1.14	.91	1.37	1.37	80
Smithfield and Fairfield .....	2,650	0.2	7.92	...	...	.38	.38	60

The following table, compiled from information supplied by the Sydney Meteorological Bureau, shows that the mean temperature of the air in Sydney during 1914 was 65 degrees Fahrenheit which is 2 degrees higher than the mean of 56 years' observation. An examination of the monthly means shows that the mean temperatures were above the average throughout the year, more especially so during April, August, November, and December. November and April were the warmest months. The rainfall for the year was heavy being 8.12 inches in excess of the average for 56 years. The months with a high rainfall were March, July, October, and December. The rainfall was below the average for the months of January, February, April, May, June, August, and November.

TABLE 2.  
Temperature and Rainfall, 1914.

	Temperature in Shade.			Departure of Mean Monthly Temperature from Average of 56 Years. (+ or -)	Rainfall.		
	Max.	Min.	Mean for Month.		Number of Rainy Days.	Amount.	Departure of Amount from Average of 56 Years. (+ or -)
	deg. F.	deg. F.	deg. F.			points.	points.
January .....	96.4	58.1	73.0	+1.4	9	66	-286
February .....	94.9	60.3	72.3	+1.2	12	169	-293
March .....	83.0	59.9	70.7	+1.4	17	1,101	+570
April .....	84.1	53.1	68.2	+3.5	4	155	-370
May .....	73.9	44.6	60.4	+1.9	11	317	-189
June .....	66.2	44.1	55.8	+1.5	10	501	-23
July .....	63.5	39.3	52.9	+0.5	15	875	+354
August .....	74.0	44.9	57.4	+2.5	9	213	-106
September .....	78.8	45.2	59.8	+0.8	12	522	+236
October .....	96.0	50.7	65.4	+1.9	15	753	+469
November .....	91.1	59.2	71.5	+4.4	20	256	-31
December .....	101.4	58.8	72.8	+2.7	16	714	+451
Means and totals for the year 1914 .....	101.4	39.3	65.0	+2.0	150	5,642	+812



TABLE 3.

TABLE showing cases of Scarlet Fever notified, the number of cases treated in Hospitals, together with the attack-rates from Scarlet Fever per 1,000 of the estimated mean population for the year 1914 :—

District.	Estimated Mean Population.	Cases of Scarlet Fever notified.	Cases removed to Hospitals.	Attack-rates of Scarlet Fever per 1,000 living.	Death-rates of Scarlet Fever per 1,000 living.
City of Sydney .....	113,300	309	142	2·73	·02
Alexandria .....	11,370	20	7	1·76	.....
Annandale .....	12,430	32	9	2·57	.....
Ashfield .....	26,120	38	5	1·45	.....
Balmain .....	35,590	91	19	2·71	·03
Bexley .....	9,400	19	4	2·02	.....
Botany .....	5,470	7	2	1·28	.....
Burwood .....	11,650	18	4	1·54	.....
Canterbury .....	21,110	92	4	4·36	·04
Concord .....	5,690	11	2	1·93	.....
Darlington .....	3,920	19	9	4·85	.....
Drummoyne .....	12,350	39	2	3·15	·08
Eastwood .....	1,260	.....	.....	.....	.....
Enfield .....	4,980	14	5	2·81	.....
Erskineville .....	7,770	12	4	1·54	.....
Glebe .....	23,020	75	31	3·26	·04
Homebush .....	980	5	3	5·10	.....
Hunter's Hill .....	4,199	3	1	·55	.....
Hurstville .....	9,580	26	1	2·71	·10
Kogarah .....	11,150	35	4	3·14	·09
Lane Cove .....	4,420	2	.....	·45	.....
Leichhardt .....	26,422	63	18	2·30	·03
Manly .....	13,200	3	.....	·23	.....
Marrickville .....	36,110	85	39	2·35	·02
Mascot .....	7,950	26	10	3·27	.....
Mosman .....	16,400	7	1	·43	.....
Newtown .....	28,080	48	21	1·70	.....
North Sydney .....	40,070	36	12	·90	.....
Paddington .....	26,170	103	33	3·94	.....
Petersham .....	23,910	34	11	1·42	·04
Randwick .....	29,270	95	28	3·25	·03
Redfern .....	25,380	74	34	2·92	.....
Rockdale .....	18,580	50	10	2·70	·10
Ryde .....	7,930	7	.....	·88	.....
St. Peters .....	10,340	62	26	6·00	.....
Strathfield .....	5,140	6	1	1·17	.....
Vaucluse .....	2,190	.....	.....	.....	.....
Waterloo .....	11,180	11	10	·98	·09
Waverley .....	25,730	45	11	1·75	·04
Willoughby .....	18,800	31	1	1·65	.....
Woollahra .....	19,580	52	16	2·77	.....
Kuring-gai Shire .....	12,800	12	4	·94	.....
Whole Metropolis .....	741,200	1,717	544	2·32	·02
Auburn .....	9,300	1	.....	·11	.....
Bankstown .....	4,250	6	2	1·41	.....
Cabramatta and Canley Vale .....	1,340	3	.....	2·24	.....
Dundas .....	1,370	1	1	·73	.....
Ermington and Rydalmere .....	1,750	2	.....	1·14	.....
Granville .....	9,950	5	1	·50	.....
Liverpool .....	3,950	7	.....	1·77	.....
Lidcombe .....	6,650	7	4	1·05	.....
Parramatta .....	12,600	41	9	3·25	·08
Prospect and Sherwood .....	4,370	7	5	1·60	.....
Smithfield and Fairfield .....	2,650	4	1	1·51	.....

The following were the notifications of Scarlet Fever for each month :—

January	...	43	August	...	172
February	...	71	September	...	169
March	...	120	October	...	187
April	...	100	November	...	155
May	...	188	December	...	137
June	...	186			
July	...	189	Total	...	1,717

TABLE 4.



TABLE 4.

NOTIFIED Scarlet Fever in the Metropolis since notification became legal, showing incidence and mortality.

Year.	Cases.	Attack-rate per 1,000 of population.	Deaths.	Case fatality per cent.	Death-rate per 1,000 of population.
1898	2,425	5·37	25	1·03	0·07
1899	556	1·20	10	1·80	0·02
1900	464	0·98	5	1·07	0·01
1901	884	1·82	13	1·41	0·02
1902	1,253	2·54	38	3·03	0·07
1903	2,910	5·77	48	1·65	0·09
1904	1,361	2·40	14	1·03	0·02
1905	1,136	2·15	16	1·41	0·03
1906	1,869	3·44	22	1·17	0·04
1907	976	1·72	11	1·12	0·02
1908	1,153	2·00	20	1·73	0·03
1909	836	1·41	8	0·9	0·01
1910	394	0·65	9	2·28	0·01
1911	369	0·57	3	0·81	0·004
1912	304	0·45	6	1·9	0·008
1913	555	0·79	12	2·16	0·002
1914	1,717	2·32	16	0·9	0·02

*Incidence*.—Scarlet fever was markedly prevalent in the Metropolitan area during 1914. The number of cases notified was 1,717 in contrast to 555 during 1913.

The attack rate was 2·32 per 1,000 of the population, being the highest since the year 1906 (3·44 per 1,000).

The fatality rate, however, is comparatively low, being 0·9 per cent. in contrast 2·16 per cent. of the previous year, indicating probably that the type of the disease has been mild recently.

The greatest prevalence of the disease was in the months May to October. Scarlet fever was least prevalent in the months of January, February, March, and December.

With regard to local incidence, the municipalities of St. Peters and Homebush were the most affected, the attack rates being respectively 6 and 5·1 per 1,000 of the population. No cases were reported from Eastwood and Vaucluse.

As regards incidence upon dwellings in the Metropolis, two persons were attacked in each of sixty-two dwellings; three in each of twelve dwellings; four in each of three dwellings, and five in one dwelling. Three cases occurred in the Institutes for the Deaf, Dumb, and Blind. About one-third of the cases notified were received into hospitals for treatment.

After removal of the patients, I am of the opinion that the disinfection of premises should be carried out by the local sanitary inspector, or at least under his supervision and direction, and that the local authority should press for no fee for work done of this nature.

Mortality rate from scarlet fever:—The case fatality per cent. during 1914, was only 0·9 as compared with 2·16 per cent. in 1913, although the number of cases notified was so much larger.

## DIPHTHERIA.

TABLE 5.

TABLE showing cases of Diphtheria notified, the number of cases treated in Hospitals, together with the attack-rates and death-rates from Diphtheria per 1,000 of the estimated mean population, for the year 1914.

District.	Estimated Mean Population.	Cases of Diphtheria notified.	Cases removed to Hospital.	Attack-rates of Diphtheria per 1,000 living.	Death-rates of Diphtheria per 1,000 living.
City of Sydney .....	113,300	345	246	3·05	·04
Alexandria .....	11,370	27	19	2·37	...
Annandale .....	12,430	44	30	3·54	·24
Ashfield .....	26,120	63	24	2·41	·08
Balmain .....	33,590	53	33	1·58	·09
Bexley .....	9,400	53	16	5·64	...
Botany .....	5,470	15	9	2·74	...
Burwood .....	11,650	24	6	2·06	·08
Canterbury .....	21,110	57	29	2·70	·09
Concord .....	5,690	11	6	1·93	·17
Darlington .....	3,920	13	6	3·41	...
Drummoyne .....	12,350	19	5	1·54	...
Eastwood .....	1,260	19	9	15·07	1·59
Enfield .....	4,980	12	7	2·40	...
Erskineville .....	7,770	25	16	3·21	·39
Glebe .....	23,020	65	34	2·82	·08
Homebush .....	980	2	1	2·04	...
Hunter's Hill .....	4,199	5	...	0·92	...
Hurstville .....	9,580	28	7	2·92	·21
Kogarah .....	11,150	76	18	6·82	·36
Lane Cove .....	4,420	4	...	0·90	...
Leichhardt .....	26,422	78	43	2·84	·15
Manly .....	13,200	39	10	2·95	·30
Marrickville .....	36,110	95	48	2·63	·05
Mascot .....	7,950	26	20	3·27	·25
Mosman .....	16,400	21	5	1·28	...
Newtown .....	28,080	90	68	3·20	·18
North Sydney .....	40,070	62	16	1·55	·07
Paddington .....	26,170	65	33	2·48	·03
Petersham .....	23,910	63	35	2·63	·08
Randwick .....	29,270	98	58	3·35	·14
Redfern .....	25,380	75	60	2·96	·16
Rockdale .....	18,580	69	30	3·71	...
Ryde .....	7,930	41	14	1·88	·05
St. Peters .....	10,340	45	30	4·35	·48
Strathfield .....	5,140	17	5	3·30	·19
Vaucluse .....	2,190	4	1	1·82	...
Waterloo .....	11,180	15	15	1·34	...
Waverley .....	25,730	50	16	1·94	·39
Willoughby .....	18,800	38	17	2·02	·11
Woollahra .....	19,580	44	20	2·34	...
Shire of Kuring-gai .....	12,800	16	5	1·25	·16
Whole Metropolis .....	741,200	2,011	1,070	2·71	·11
Auburn .....	9,300	26	6	2·80	...
Bankstown .....	4,250	40	16	9·41	...
Cabramatta and Canley Vale .....	1,340	2	...	1·50	...
Dundas .....	1,370	12	6	8·76	...
Ermington and Rydalmere .....	1,750	3	2	1·71	...
Granville .....	9,950	37	13	3·72	·10
Liverpool .....	3,950	24	...	6·08	·25
Lidcombe .....	6,650	16	6	2·41	...
Parramatta .....	12,600	42	16	3·33	·71
Prospect and Sherwood .....	4,370	20	9	4·58	·46
Smithfield and Fairfield .....	2,650	11	3	4·15	...

The following were the notifications of Diphtheria for each month :—

January ...	154	August ...	133
February ...	180	September ...	84
March ...	212	October ...	84
April ...	255	November ...	91
May ...	281	December ...	141
June ...	219		
July ...	177	Total ...	2,011

TABLE 6.

TABLE 6.

NOTIFIED Diphtheria in the Metropolis since notification became legal, showing incidence and mortality in each year.

Year.	Cases.	Attack-rate per 1,000 of Population.	Deaths.	Case Fatality per cent.	Death-rate per 1,000 of Population.
1898 .....	613	1·43	75	12·23	·16
1899 .....	285	·66	14	4·91	·03
1900 .....	278	·63	21	7·55	·05
1901 .....	439	·95	65	14·82	·13
1902 .....	393	·79	37	9·41	·07
1903 .....	690	1·37	73	10·60	·14
1904 .....	738	1·40	45	6·10	·08
1905 .....	695	1·19	42	6·60	·07
1906 .....	659	1·21	32	4·85	·05
1907 .....	659	1·16	46	6·98	·08
1908 .....	880	1·53	38	4·20	·06
1909 .....	1,144	1·93	43	3·70	·07
1910 .....	2,109	3·47	61	2·89	·10
1911 .....	1,834	2·86	58	3·16	·09
1912 .....	2,632	3·92	105	3·9	·15
1913 .....	2,041	2·89	96	4·70	·13
1914 .....	2,011	2·67	95	4·72	·11

*Incidence.*—During the year 1914, diphtheria was widely prevalent, in keeping with the experience of the previous five years, although there was a slight decrease in the number of cases notified as compared with the preceding year. The type of the disease retains approximately the same virulence as during the years 1912 and 1913.

In the Metropolis proper, 2,011 cases were notified, the attack rate being 2·67 per 1,000 of the population.

The monthly numbers of cases notified were highest in March, April, May, and June, and lowest in September, October, and November. No municipality had a record for the year of being entirely free from the disease.

The municipalities of Homebush (2 cases), Lane Cove (4), Vaucluse (4), and Hunter's Hill (5), were least affected by diphtheria.

The highest attack-rate was in the municipality of Eastwood (15·07 per 1,000), with 19 cases; but this is not of great import, the municipality not being a very populous one. Kogarah and Bexley had rather heavy attack rates, 6·82 and 5·64 respectively. The lowest attack rates were recorded in Lane Cove, with ·90; Hunter's Hill, ·92; Shire of Kuring-gai, 1·25; Mosman, 1·28; and Drummoyne, 1·54.

Among the extra Metropolitan districts, Cabramatta and Canley Vale had the lowest attack rate, 1·5 per 1,000, whilst Bankstown had the highest rate of 9·41 per 1,000.

The incidence in dwellings within the Metropolitan area shows that 2 cases occurred in each of 53 dwellings, 3 in each of 14 dwellings, 4 in each of 6 dwellings, and 5 in each of 3 dwellings. Three cases occurred among the inmates of the Deaf and Dumb Institute, Darlington.

Cases of diphtheria were reported from two dairies.

Of the 2,011 patients notified within the Metropolis, 1,070 received hospital treatment.

*Mortality.*—Out of 2,011 persons attacked in the Metropolis, 95 died, which is equal to a case fatality rate of 4·72 per cent. The death rate per 1,000 of the population, ·11 was approximately the same as in the preceding year (·13).



TABLE 7.

## TYPHOID FEVER.

TABLE showing cases of Typhoid Fever notified, the number of cases treated in hospitals, together with the attack rates and death rates from Typhoid Fever per 1,000 of the estimated mean population for the year 1914 :—

District.	Estimated mean population.	Cases of typhoid fever notified.	Cases removed to hospital.	Attack-rate of typhoid fever per 1,000 living.	Death rate of typhoid fever per 1,000 living.
City of Sydney .....	113,300	104	74	·92	·11
Alexandria .....	11,370	33	19	2·90	·18
Annandale .....	12,430	14	9	1·13	·16
Ashfield .....	26,120	19	7	·69	·04
Balmain .....	33,590	15	7	·45	·03
Bexley .....	9,400	6	2	·64	·11
Botany .....	5,470	8	6	1·46	.....
Burwood .....	11,650	6	2	·51	·17
Canterbury .....	21,110	36	21	1·70	·09
Concord .....	5,690	3	1	·52	·17
Darlington .....	3,920	7	3	1·79	.....
Drummoyne .....	12,350	5	2	·40	·08
Eastwood .....	1,260	1	.....	·79	.....
Enfield .....	4,980	9	8	1·80	·20
Erskineville .....	7,770	4	2	·51	.....
Glebe .....	23,020	26	17	1·12	·21
Homebush .....	980	1	1	1·02	.....
Hunter's Hill .....	4,199	2	1	·37	·36
Hurstville .....	9,580	12	5	1·25	·42
Kogarah .....	11,150	6	3	·54	·18
Lane Cove .....	4,420	.....	.....	.....	.....
Leichhardt .....	26,422	22	11	·80	·15
Manly .....	13,200	4	1	·30	.....
Marrickville .....	36,110	16	9	·44	·14
Mascot .....	7,950	27	18	3·40	·25
Mosman .....	16,400	10	3	·61	.....
Newtown .....	28,080	26	12	·93	·07
North Sydney .....	40,070	25	9	·62	·10
Paddington .....	26,170	25	18	·96	·08
Petersham .....	23,910	7	5	·29	·08
Randwick .....	29,270	26	18	·89	·14
Redfern .....	25,380	26	16	1·02	·12
Rockdale .....	18,580	9	5	·48	·05
Ryde .....	7,930	5	3	·63	·38
St. Peters .....	10,340	8	4	·77	.....
Strathfield .....	5,140	1	.....	·19	·19
Vaucluse .....	2,190	.....	.....	.....	.....
Waterloo .....	11,180	18	10	1·61	·09
Waverley .....	25,730	12	5	·47	.....
Willoughby .....	18,800	4	.....	·21	.....
Woollahra .....	19,580	21	11	1·12	·16
Shire of Kuring-gai .....	12,800	7	2	·55	·16
Whole Metropolis .....	741,200	616	350	·83	·11
Auburn .....	9,300	.....	.....	.....	.....
Bankstown .....	4,250	2	2	·47	.....
Cabramatta and Canley Vale .....	1,340	1	.....	·75	.....
Dundas .....	1,370	3	2	2·19	.....
Ermington and Rydalmere .....	1,750	1	1	·57	.....
Granville .....	9,950	5	3	·50	·10
Liverpool .....	3,950	3	.....	·76	.....
Lidcombe .....	6,650	4	2	·60	.....
Parramatta .....	12,600	9	4	·71	·24
Prospect and Sherwood .....	4,370	.....	.....	.....	.....
Smithfield and Fairfield .....	2,650	.....	.....	.....	.....

The following were the notifications of Typhoid Fever for each month :—

January ...	59	August ...	20
February ...	73	September ...	18
March ...	69	October ...	28
April ...	99	November ...	21
May ...	90	December ...	64
June ...	45	.....	.....
July ...	30	Total ...	616

TABLE 8.

TABLE 8.

NOTIFIED Typhoid Fever in the Metropolis since notification became legal, showing incidence and mortality in each year.

Year.	Cases.	Attack-rate per 1,000 of Population.	Deaths.	Case Fatality per 100 Notified Cases	Death-rate per 1,000 of Population.
1898 .....	824	1.93	73	8.86	.17
1899 .....	786	1.81	87	11.08	.20
1900 .....	983	2.25	103	10.47	.23
1901 .....	829	1.71	81	9.77	.17
1902 .....	610	1.23	59	9.70	.12
1903 .....	833	1.66	81	9.72	.16
1904 .....	665	1.29	64	9.62	.12
1905 .....	561	1.06	58	10.34	.11
1906 .....	485	.89	60	12.37	.11
1907 .....	505	.89	51	10.09	.09
1908 .....	678	1.17	75	11.06	.13
1909 .....	700	1.18	81	11.50	.14
1910 .....	812	1.33	84	10.34	.13
1911 .....	488	.76	50	10.24	.08
1912 .....	535	.80	53	9.9	.07
1913 .....	566	.81	59	10.42	.09
1914 .....	616	.81	82	13.31	.11

*Incidence*:—616 cases of Typhoid fever were notified in the Metropolis proper during the year 1914. The attack rate, .81 per 1,000 is the same as that of the preceding year, which was the lowest, with the exception of the year 1912, since notification was made compulsory.

The largest number of notifications was received in the month of April, and the smallest in September. Among the different Metropolitan municipalities, Mascot experienced the highest attack rate, 3.44 per 1,000 inhabitants, followed by Alexandria with an attack rate of 2.9 per 1,000 inhabitants. No cases were notified from the municipalities of Lane Cove and Vacluse. Considering the populous nature of the suburbs the attack rates were low in the municipalities of Willoughby, 21; Petersham .29, and Manly .30.

In the extra Metropolitan districts no cases were reported from Auburn, Prospect and Sherwood, and Smithfield and Fairfield.

A high attack rate occurred at Dundas, 2.19, although there were in reality 3 cases in a population of 1,370.

The attack rate per 1,000 at Parramatta was .71, and at Liverpool .76.

*Incidence in dwellings*—Two cases were reported in each of 8 dwellings; 3 cases in each of 4 dwellings; and 4 cases in 1 dwelling.

Out of 616 cases notified, 350 patients were ascertained to have been treated in hospitals.

*Mortality*:—Deaths from typhoid fever totalled 82, which is equal to a death rate of .11 per 1,000 living.

The case fatality, or number of deaths compared with attacks from typhoid fever in 1914 was 13.31 per cent. as compared with 10.42 per cent. in 1913, indicating that the disease was of a more virulent type than usual.

Since the reduction of the incidence of typhoid fever in a large city is in great measure dependent upon the extension of the water carriage system of sewage removal, every effort should be made to encourage the Metropolitan Water Supply and Sewerage Board in its work of extension of the sewerage system to the outer suburbs.

The Acting Secretary of the Water and Sewerage Board has supplied me with the information that the number of houses connected with the sewer during 1914 was 5,556, and that the total number which were connected at the end of the year was 117,036.

Respecting the nature and other matters relating to these diseases of scarlet fever, diphtheria, and typhoid fever I have not discussed them at any length since Dr. Purdy so ably dealt with them in his report for the year 1913.

With regard to public institutions, infectious diseases were contracted by 21 inmates in Royal Prince Alfred Hospital; by 3 inmates and 2 nurses in the Sydney Hospital; by 4 nurses in St. Vincent's Hospital (typhoid fever); by 8 inmates and 4 nurses in the Royal Alexandra Hospital for Sick Children; by 7 inmates, 11 nurses, and 1 attendant in the Coast Hospital.

Seventy-two cases were notified during the year as having contracted two infectious diseases.

#### TUBERCULOSIS.

The number of deaths from all forms of tuberculosis in the Metropolis proper during 1914 was 589, of which 501 were due to tuberculosis of the lungs, 44 to tubercular meningitis, and 44 to other tubercular diseases. These figures include 88 deaths from consumption, of Metropolitan residents, which occurred in the Waterfall Sanatorium for Consumptives. The total does not include 12 deaths which occurred in the Benevolent Asylum, all former Metropolitan residents. When these figures are included the total deaths from phthisis for the year were 601.

The appended table represents as accurately as possible the true number of deaths from phthisis which ought to be debited to the Metropolis proper for each of the past twelve years.

1903	...	...	...	589	1909	...	...	...	458
1904	...	...	...	550	1910	...	...	...	495
1905	...	...	...	495	1911	...	...	...	541
1906	...	...	...	498	1912	...	...	...	494
1907	...	...	...	512	1913	...	...	...	621
1908	...	...	...	504	1914	...	...	...	601

NOTIFICATION



## NOTIFICATION OF PHTHISIS.

Dr. Purdy writes in his report for the year 1913 as follows :—

In 1904 the Sydney City Council took advantage of the special powers under the Sydney Corporation Act by adding to the by-laws for the promotion of Public Health a requirement for the notification by medical practitioners of all cases of pulmonary consumption occurring within the city seen or attended by them. Thus for the last ten years it has been possible to carry out routine measures of inspection and disinfection of the houses where cases of consumption have been in residence within the city. It was found, however; that the term pulmonary consumption was not sufficiently comprehensive, and did not embrace cases of laryngeal tuberculosis. Recently, therefore, the City Council passed a by-law which has been gazetted, substituting the word "phthisis" for "pulmonary consumption," and defining "phthisis" to mean consumption of the lungs or consumption of the throat.

Recently a special committee of the Royal College of Physicians, of London, reported on the infectivity of pulmonary tuberculosis. In view of the exaggerated fear of the infectivity of pulmonary tuberculosis entertained by the public, the consequent unnecessary disabilities imposed upon sufferers from the disease, and the opposition raised in many places to the establishment of institutions for its detection and treatment, it was considered that a reassuring and authoritative statement with regard to the degree of danger attaching to contact and communication with tuberculous persons would be of value. After showing that tuberculosis is acquired by the inhalation or swallowing of tubercle bacilli, the report states: "There is no evidence that tuberculosis can be conveyed to others either by the breath alone, or by emanations from patients, or by their garments, unless soiled by dried sputum or discharges."

The spread of tuberculosis is favoured by uncleanness, over-crowding, and imperfect ventilation, and is hindered by the opposite conditions. Experience in hospitals and other institutions, where the following precautionary measure have been thoroughly carried out, indicate that by such measures the risk of infection is reduced to a minimum, namely :—

- (a) The careful disposal and disinfection of the sputum and other discharges.
- (b) The disinfection or destruction of soiled handkerchiefs, clothes, and linen.
- (c) The removal of dust by frequent moist cleaning of the floors, walls, &c., of the rooms.
- (d) The supply of abundant air space and free ventilation with fresh air.

No risk is incurred by living in the immediate neighbourhood of institutions for the treatment of tuberculosis which are properly conducted.

Within the city of Sydney (where alone, at present, consumption is notifiable) 228 cases of phthisis were notified by medical practitioners. Many of these cases, however, were residents outside the limits of the city proper, but were seen and treated by medical practitioners within the city. When not otherwise specified by the notifying medical practitioner, these patients are visited by officers of the City Council staff, and advice given as to the precautions to be taken to avoid the communication of infection.

After the death or removal of the patient the premises previously occupied by him or her are disinfected by the City Council's trained staff. 158 premises were so dealt with during the year 1914.

It is hoped in the near future that pulmonary tuberculosis will be made a notifiable disease in the Metropolitan combined sanitary districts.

In the city proper the nurse inspector visited periodically the female consumptives notified. Of these 25 died, 16 removed to Waterfall Sanatorium, 5 went to Thirlmere Sanatorium, 20 are resident at home and have improved, whilst 3 are not progressing favourably.

## INFANTILE PARALYSIS.

This disease, known also as anterior poliomyelitis, has in recent years been considered communicable or infectious, and was made notifiable in New South Wales from 1st January, 1912. The preventive measures adopted are isolation, the disinfection of the patient's nose and throat, and protection from flies, since it is known that a biting fly is capable of transmitting the disease from the sick to the healthy. The premises occupied by the patient should be disinfected, and care taken to adequately sterilise any materials which might be impregnated with nasal discharges.

Twenty-eight cases were notified in the Metropolitan combined sanitary districts in 1912, 32 in 1913, and 63 in 1914. Of these 63 cases, 2 occurred in the extra Metropolitan districts (Bankstown 1, Granville 1). The monthly distribution of cases was as follows :—

	1912.	1913.	1914.		1912.	1913.	1914.
January ...	1	8	1	July ...	...	...	3
February ...	2	5	1	August ...	6	2	1
March ...	3	6	4	September ...	3	1	...
April ...	2	4	17	October ...	1	...	1
May ...	5	4	27	November ...	2	...	1
June ...	...	2	7	December ...	3	...	...
					28	32	63

Of the 63 cases in 1914, 2 patients were under 1 year of age, 22 were over 1 year and under 2, 15 over 2 and under 3 years, 7 between 3 and 4 years, 6 between 4 and 5 years, 3 between 5 and 6 years, 4 between 6 and 7 years, 2 were aged 8 years, 1 aged 13, and 1 aged 15 years.

The following table shows the distribution of the cases in 1914, indicating that they may be considered sporadic in nature :—

Sydney ...	6	Leichhardt ...	3	St. Peters ...	2
Ashfield ...	5	Manly... ...	2	Waverley ...	8
Balmain ...	1	Marrickville ...	3	Willoughby ...	2
Botany ...	1	Newtown ...	5	Woollahra ...	2
Canterbury ...	3	Paddington ...	1	Bankstown ...	1
Drummoyne ...	2	Petersham ...	2	Granville ...	1
Darlington ...	2	Randwick ...	3		
Erskineville ...	2	Redfern ...	3	Total ...	63
Glebe ...	2	Ryde ...	1		

## INFANTILE



## INFANTILE MORTALITY.

The deaths of children under 1 year of age in the Metropolitan districts during 1914 numbered 1,539, whilst the births numbered 20,821, giving an infantile mortality-rate of 73 per 1,000 births for the whole Metropolitan area and 68 for the Metropolis proper. The deaths of infants under 1 year of age made up 18·9 per cent. of the total deaths at all ages. The infantile mortality-rate is the lowest on record, as indicated in the appended table.

Year.	Deaths of Children under 1 year per 1,000 births.	Year.	Deaths of Children under 1 year per 1,000 births.
1880 ... ..	192	1898 ... ..	153
1881 ... ..	162	1899 ... ..	120
1882 ... ..	183	1900 ... ..	109
1883 ... ..	163	1901 ... ..	120
1884 ... ..	172	1902 ... ..	119
1885 ... ..	187	1903 ... ..	116
1886 ... ..	173	1904 ... ..	99
1887 ... ..	141	1905 ... ..	88
1888 ... ..	152	1906 ... ..	85
1889 ... ..	172	1907 ... ..	97
1890 ... ..	135	1908 ... ..	83
1891 ... ..	148	1909 ... ..	81
1892 ... ..	130	1910 ... ..	82
1893 ... ..	147	1911 ... ..	71
1894 ... ..	134	1912 ... ..	76
1895 ... ..	131	1913 ... ..	77
1896 ... ..	139	1914 ... ..	68
1897 ... ..	129		

TABLE 9.

INFANT mortality in the Metropolis during 1914, from stated causes :—

Measles ... ..	1	Diseases of the Stomach...	8
Whooping Cough ... ..	34	Diarrhoea and Enteritis...	457
Diphtheria ... ..	10	Intestinal Obstruction & Hernia ... ..	12
Influenza... ..	...	Other Diseases of Digestive System ... ..	4
Tubercular Meningitis ... ..	9	Bright's Disease ... ..	3
Other Tubercular Diseases ... ..	7	Prematurity ... ..	360
Cerebro-spinal Fever ... ..	1	Developmental Diseases...	370
Meningitis ... ..	17	Accident ... ..	8
Convulsions ... ..	48	All Other Causes ... ..	55
Other Diseases of Nervous System ... ..	5		
Bronchitis ... ..	23	Total ... ..	1,539
Pneumonia ... ..	101		
Other Respiratory Diseases ... ..	6		

Under the general heading "Developmental Diseases" are included injury at birth, debility at birth, atelectasis, congenital defects, atrophy, marasmus, and dentition.

Comparison may be made between the number of deaths under 1 year of age from certain of the causes in the last table with those from the same causes during the five antecedent years :—

TABLE 10.

Causes of Death.	1909.	1910.	1911.	1912.	1913.	1914.
Measles.....	2	14	2	32	2	1
Whooping-cough .....	3	61	42	30	83	34
Diphtheria .....	2	7	6	8	7	1
Diarrhoeal Diseases .....	408	378	350	523	474	457
Tubercular Meningitis .....	12	15	6	9	13	
Other Tubercular Diseases .....	10	9	2	1	5	
Prematurity .....	286	308	298	310	398	360
Developmental Diseases .....	236	207	250	292	294	370
Convulsions .....	48	34	30	26	30	48
Meningitis .....	12	15	24	16	23	17
Bronchitis .....	38	42	42	37	39	23
Pneumonia .....	70	94	79	65	83	101
Diseases of Stomach .....	18	26	19	17	14	8
Intestinal Obstruction.....	15	10	12	7	13	12
All other causes.....	89	108	105	118	114	82
Totals.....	1,257	1,328	1,267	1,491	1,592	1,539

This table shows that the death-rate from measles was small in contra distinction to the year 1912.

A decrease in the number of deaths from whooping cough also occurred.

A further decrease in diarrhoeal diseases is noted since the year 1912; the number of deaths being 457, being 17 less than for the previous year. Taking the number of lives at risk as represented by the number of births, 20,821, the mortality-rate for diarrhoeal diseases was 21 per 1,000 births as compared with a rate of 27 in the year 1913.

If reference is made to Table I, a comparison may be made of the infantile mortality-rates in the various municipal areas of the Metropolitan combined sanitary districts. It appears from that table that the most unfavourable rate was experienced in Vaucluse, Ermington, and Rydalmere. It must be borne in mind, however, that it is unfair to institute comparisons respecting infantile mortality-rates as applicable to

to municipalities unless births are distributed to the various districts in a similar manner to the deaths. In many municipalities various institutions and private hospitals exist which tend to vitiate the figures given, as for instance, the Lady Edeline Hospital for Babies in Vacluse, the Women's Hospital in Paddington, &c.

TABLE 11.  
RECORDS of Newly-born Children visited in the City of Sydney.

	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.
Number visited.....	781	1,455	1,240	1,272	1,175	1,426	1,554	1,323	1,420	1,463	1,366
Entirely breast-fed .....	564 (72·2 per cent.)	1,114 (76·5 per cent.)	977 (78·8 per cent.)	1,019 (80·1 per cent.)	958 (81·5 per cent.)	1,181 (82·8 per cent.)	1,291 (83·1 per cent.)	1,092 (82·5 per cent.)	1,199 (84·4 per cent.)	1,323 (90·4 per cent.)	1,278 (94·2 per cent.)
Partially breast-fed .....	166 (21·3 per cent.)	250 (17·2 per cent.)	210 (17 per cent.)	202 (15·9 per cent.)	175 (14·8 per cent.)	214 (15 per cent.)	231 (14·86 per cent.)	260 (15·1 per cent.)	134 (9·4 per cent.)	79 (5·5 per cent.)	43 (3·3 per cent.)
Not breast-fed.....	51 (6·5 per cent.)	91 (6·3 per cent.)	53 (4·2 per cent.)	51 (4 per cent.)	42 (3·6 per cent.)	31 (2·2 per cent.)	32 (2·07 per cent.)	32 (2·3 per cent.)	87 (6·1 per cent.)	61 (4·2 per cent.)	45 (3·5 per cent.)

The visiting of infants in the city of Sydney is carried out by Miss Bloomfield, the Nurse Inspector of the Health and Sanitary Department of the City Council. In the more centrally situated and populous suburbs of Redfern, Darlington, Newtown, Glebe, Alexandria, Waterloo, Mascot, and Botany, the work is performed by Mrs. Day and Miss Burne, the Nurse Inspectors, employed from the office of the Director General of Health, who are under the personal supervision of Dr. Armstrong, the Senior Medical Officer. The year 1914 was the eleventh in which this work has been carried on within the city of Sydney. An important feature since the introduction of the Commonwealth Maternity Bonus, is that the average age of children when first visited has fallen from 5·2 to 2·3 weeks, due to earlier notification of births.

The most gratifying result brought about by the visitation of newly-born infants has been an increase in the proportion of breast-fed children in the city.

Dr. Armstrong records that, when the work of home visiting by trained women inspectors was undertaken in the year 1904, the proportion of entirely breast-fed children found on first visits was 72·2 per cent. of all those visited. In 1911 the proportion of entirely breast-fed children was 82·5, and in 1912 was 84·4 of all the children visited. These figures alone are convincing evidence of the benefits accruing from the teaching campaign inaugurated 10 years ago. The increased percentage of 90·4 children being entirely breast-fed in 1913, and 93·2 in 1914, is accounted for by the fact that the children were seen on average at an age a fortnight younger than in previous years, resort to artificial feeding increasing in proportion to the age of the child.

During 1914, the number of first visits of the City Nurse Inspector to mothers was 1,366, and 98 subsequent visits. The average age of infants when visited was 2·5 weeks. Full advantage was taken of the excellent work carried out at the Alice Rawson School for Mothers, of which 309 cases were referred by the Nurse Inspector. One hundred and thirty-nine mothers were found to be living in one room, out of the 1,366 visited during the year. The number of married couples living in single rooms was greater in proportion at the beginning of 1914 than at the end, owing to removal to suburbs of some, others to Canvas Town, and when the war broke out, men who had enlisted, or were out of work and had married women from the country, sent them home to their people.

#### NOTES ON THE SANITARY WORK OF THE YEAR.

One hundred and eighty-seven dwellings outside the city were inspected and ascertained to be in an insanitary condition. They were distributed as follows:—

Alexandria ...	8	Hunter's Hill ...	2	*Randwick ...	31
Annandale ...	6	Kogarah ...	1	Redfern ...	2
Ashfield ...	9	Kuring-gai Shire ...	2	Strathfield ...	1
Balmain ...	13	Leichhardt ...	5	St. Peters ...	12
Botany ...	4	Marrickville... ..	5	Waterloo ...	2
Canterbury... ..	1	Mascot ...	2	Woollahra ...	5
Concord ...	5	Mosman ...	6	Willoughby ...	1
Darlington ...	2	North Sydney ...	4		
Enfield ...	2	Newtown ...	1	Extra—Metropolitan.	
Erskinville ...	5	Paddington ...	43	Dundas ...	1
Glebe ...	3	Petersham ...	1	Lidcombe ...	1

\* Includes 29 "shanty" dwellings at Matraville.

The yards in connection with 87 premises in the municipality of Glebe were also inspected.

Garbage depôts were inspected at Alexandria, Mosman, Paddington, Randwick, and Waverley.

Garbage destructors were also inspected at Leichhardt and North Sydney.

The inspection of garbage depôts elicited for the most part a very unsatisfactory condition of affairs, and strong representations were made as to the adoption of the modern method for the destruction of garbage by incineration.

Nightsoil depôts were inspected at Canterbury, Drummoyne, Waverley, Prospect and Sherwood, Hurstville, Randwick, and Alexandria. Sites for proposed nightsoil depôts were inspected at Drummoyne, Dundas, Kogarah, and Bankstown.

Nuisances arising from drainage were investigated at Lane Cove, Burwood, Hurstville, Leichhardt, Ashfield, North Sydney, Mascot, Randwick, Mosman, Hornsby, Alexandria, Woollahra, Canterbury, Concord, Hunter's Hill, Vacluse, Waverley, Willoughby, Waterloo, and Ryde.

Nuisances from stables were investigated at Kogarah, Newtown, Annandale, Randwick, Hornsby, Enfield, Woollahra, Leichhardt, and North Sydney.

Complaints as to stables are of frequent occurrence, and it is desirable, in my opinion, that legislation should be sought to prevent the erection of same within a specified distance of dwellings, at least in the more thickly populated suburbs. As a result of inspections it was ascertained that insufficient privy accommodation was afforded on premises at Auburn, Alexandria, Leichhardt, Erskinville, Waverley, Vacluse, and Mascot.



Miscellaneous nuisances were investigated at Erskineville Park, Alexandria, Kogarah, Annandale, Leichhardt, Randwick, and Petersham.

*Septic Tanks.*—Sites were inspected and plans examined in connection with 77 applications for septic-tank installations in the following districts:—Gordon (6), Lindfield (1), Pymble (8), Turramurra (2), Roseville (3), Wahroonga (6), Hornsby (7), Dundas (4), Drummoyne (3), Hunter's Hill (4), Vacluse (13), Woollahra (16), and Ryde (4.)

Nuisances arising from septic tanks were investigated at Hunter's Hill (1), Woollahra (3), and Waverley (1).

Legal action was taken in two instances against persons constructing septic tanks without the consent of the Council of Hunter's Hill, and convictions obtained.

Matters relating to the following are dealt with in the Annual Report of the Director-General of Public Health for the year 1914:—Unsuitable sites for building purposes; private hospitals; the Pure Foods Act, 1908; Dairies Supervision Act; and Noxious Trades.

### LEGAL PROCEEDINGS.

A table is appended showing the action taken by local authorities under the various Acts dealing with Public Health Administration:—

TABLE 12.

SHOWING Legal Proceedings taken by local authorities in respect of matters affecting the Public Health during the year 1914.

Municipality.	Public Health.	Dairies Supervision.	Noxious Trades.	Police Offences.	Cattle Slaughtering, Diseased Animals, and Meat.	Local Government Ordinances.	Convictions.	Dismissals.	Withdrawn.	Total.
Alexandria .....	.....	.....	2	.....	.....	1	3	.....	.....	3
Annandale .....	.....	.....	.....	.....	.....	3	2	.....	1	3
Ashfield .....	1	.....	.....	1	.....	15	15	1	1	17
Balmain .....	3	.....	.....	.....	.....	3	6	.....	.....	6
Bexley .....	.....	.....	.....	.....	.....	1	.....	.....	1	1
*Botany .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burwood .....	1	.....	1	.....	.....	1	3	.....	.....	3
Canterbury .....	1	.....	.....	.....	.....	.....	1	.....	.....	1
*Concord .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Darlington .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Drummoyne .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Eastwood .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Enfield .....	.....	.....	.....	.....	.....	4	4	.....	.....	4
Erskineville .....	.....	.....	.....	.....	.....	2	2	.....	.....	2
Glebe .....	.....	2	.....	.....	.....	14	15	.....	1	16
*Homebush .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Hunter's Hill .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hurstville .....	6	.....	.....	.....	.....	3	7	.....	2	9
Kogarah .....	1	.....	.....	.....	.....	1	2	.....	.....	2
*Lane Cove .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leichhardt .....	.....	1	.....	8	.....	13	22	.....	.....	22
Manly .....	2	.....	.....	.....	.....	8	7	3	.....	10
Marrickville .....	.....	1	.....	.....	.....	5	6	.....	.....	6
Mascot .....	.....	.....	.....	.....	.....	2	2	.....	.....	2
Mosman .....	1	.....	.....	.....	.....	16	14	2	1	17
Newtown .....	.....	.....	.....	.....	.....	3	3	.....	.....	3
North Sydney .....	21	2	.....	.....	.....	5	22	1	5	28
Paddington .....	18	.....	.....	.....	.....	15	30	.....	3	33
Petersham .....	1	.....	.....	.....	.....	5	6	.....	.....	6
Randwick .....	1	.....	.....	9	.....	6	14	1	1	16
Redfern .....	.....	2	.....	.....	.....	5	7	.....	.....	7
*Rockdale .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Ryde .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*St. Peters .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Strathfield .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Vacluse .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waterloo .....	1	1	.....	.....	.....	15	16	.....	1	17
Waverley .....	15	.....	.....	.....	.....	4	18	1	.....	19
*Willoughby .....	.....	.....	.....	.....	.....	17	16	1	.....	17
Woollahra .....	.....	.....	.....	.....	.....	5	4	1	.....	5
*Auburn .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Bankstown .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dundas .....	1	.....	.....	.....	.....	.....	.....	1	.....	1
*Ernington .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Granville .....	1	.....	.....	.....	.....	3	4	.....	.....	4
*Lidcombe .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Liverpool .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Parramatta .....	.....	.....	1	.....	.....	1	2	.....	.....	2
Prospect .....	2	.....	.....	.....	.....	.....	2	.....	.....	2
*Smithfield .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Shires.</i>										
*Hornsby .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Kuring-gai .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*Warringah .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\* No prosecutions during year.



TABLE 13.

## SANITARY OFFICERS.

The following list shows the names and qualifications of the Sanitary Officers of the several municipalities in the Metropolitan Districts:—

Municipality.	Population.	Sanitary Inspectors.
City of Sydney.....	113,300	Chief Inspector, B. Lloyd, Cert. R.S.I.; J. D. Smith, Cert. R.S.I.; W. E. Gundry, Cert. R.S.I.; W. D. McNeil, Cert. R.S.I.; J. W. Martin, Cert. R.S.I.; F. Letchford, Cert. R.S.I.; F. A. Cuddy, Cert. R.S.I.; O. Vincent, Cert. R.S.I.; E. A. Dowling, Cert. R.S.I.; A. H. Judd, Cert. R.S.I.; E. S. Furness, Cert. R.S.I.; A. Cook, Cert. R.S.I.; A. S. Webb, Cert. R.S.I.; W. O. Vogwell, Cert. R.S.I.; Miss Isla Bloomfield, Cert. R.S.I.; A. B. Norton, Cert. R.S.I.; George Cornwell, James Brady, Meat Inspectors' Certificate, Sydney Technical College.
Alexandria.....	11,870	J. S. Adam, Cert. R.S.I.
Annandale.....	12,430	A. S. Campbell.
Ashfield.....	26,120	Charles Van Treight, Cert. R.S.I.
Balmain.....	33,590	F. J. Paris, Cert. R.S.I.; and A. Sinfield, Cert. R.S.I.
Bexley.....	9,400	W. J. Devene, Cert. R.S.I.
Botany.....	5,470	J. Ellis, Cert. R.S.I.
Burwood.....	11,650	J. J. Wright, Cert. R.S.I.
Canterbury.....	21,110	A. M. Judd, Cert. R.S.I.
Conecord.....	5,690	F. Hildred, Cert. R.S.I.
Darlington.....	3,920	A. P. Gibson, combines duties of Town Clerk and Inspector.
Drummoyne.....	12,350	H. V. Stewart, Cert. R.S.I.
Eastwood.....	1,260	S. G. Small, combines duties of Town Clerk and Inspector.
Enfield.....	4,980	J. S. Adam, Cert. R.S.I.
Erskineville.....	7,770	R. Bell, Cert. R.S.I.
Glebe.....	23,020	W. P. Young, Cert. R.S.I.
Homebush.....	980	G. Bressington.
Hunter's Hill.....	5,410	W. C. Wise, Town Clerk and Inspector; J. J. Petre, As istant Inspector.
Hurstville.....	9,580	H. Allsopp, Sydney Technical College Certificate.
Kogarah.....	11,150	P. Bailey, Cert. R.S.I.
Lane Cove.....	4,420	G. T. Long, Cert. R.S.I.
Leichhardt.....	27,420	A. Pritchard, Cert. R.S.I.
Manly.....	13,200	L. S. Crakenthorpe, Cert. R.S.I.
Marrickville.....	36,110	P. H. McNeice, Cert. R.S.I.
Mascot.....	7,950	G. M. Shaw.
Mosman.....	16,400	J. L. Walters, Cert. R.S.I.
Newtown.....	28,080	J. Watson, Cert. R.S.I.
North Sydney.....	40,070	A. Bennett, Cert. R.S.I.; and D. Tate, Cert. R.S.I.
Paddington.....	26,170	A. D. Carmichael, Cert. R.S.I.; and J. Miller, Cert. R.S.I.
Petersham.....	23,910	J. E. Doswell, Cert. R.S.I.
Randwick.....	29,270	J. A. Wauchope, Cert. R.S.I.; and P. H. Macky, Cert. R.S.I.
Redfern.....	25,380	J. Forgie, Cert. R.S.I.
Rockdale.....	10,580	J. V. Tyrell, Cert. R.S.I.
Ryde.....	17,930	J. W. Ainsworth.
St. Peters.....	10,340	F. Fitzpatrick, Cert. R.S.I.
Strathfield.....	5,140	J. S. Cater, Cert. R.S.I.
Vaucluse.....	2,190	J. A. O'Connor, Cert. R.S.I.
Waterloo.....	11,180	J. W. Henning, Cert. R.S.I.
Waverley.....	25,739	A. W. Gibbs, Cert. R.S.I.
Willoughby.....	18,800	J. Naylor, M. F. Hughes, Cert. R.S.I. Assistant.
Woollahra.....	19,580	T. J. Lawson, Cert. R.S.I.
Shire of Kuring-gai.....	12,800	J. Ward.

*Extra Metropolitan Municipalities.*

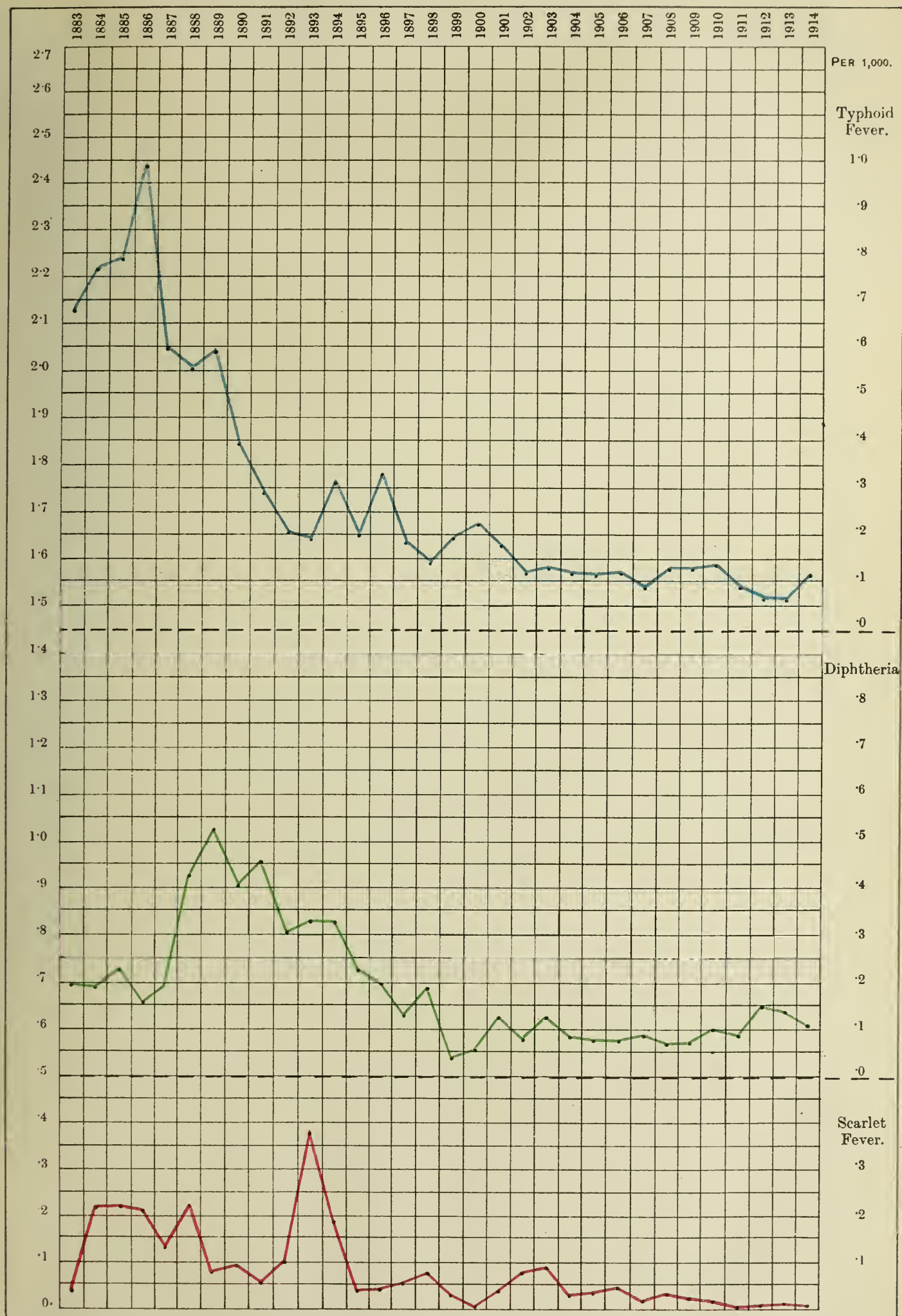
Municipality.	Population.	Sanitary Inspector.
Auburn.....	7,225	A. E. Williams, Cert. R.S.I.
Bankstown.....	4,000	E. E. Thompson.
Cabramatta and Canley Vale...	1,250	W. H. Johnson, Town Clerk and Inspector.
Dundas.....	1,150	T. Carson, Town Clerk and Inspector.
Ermington and Rydalmere.....	1,750	T. Feather, Town Clerk and Inspector.
Granville.....	10,400	W. P. Upcroft, Cert. R.S.I.
Lidcombe.....	5,418	C. Cook.
Liverpool.....	5,500	A. McFarlane.
Parramatta.....	13,000	C. W. Bardsley, Cert. R.S.I.
Prospect and Sherwood.....	6,200	H. R. Stoney, Cert. R.S.I.
Smithfield and Fairfield.....	2,300	R. H. Dummett, Town Clerk and Inspector.

NOTE.—The letters "Cert. R.S.I." after an officer's name indicates the possession of the Certificate of the Royal Sanitary Institute. \* Messrs. E. S. Furniss and W. O. Vogwell hold also the Certificate of Competency of the Sydney Technical College for a Sanitary Inspector.





DIAGRAM showing the ANNUAL DEATH-RATES in the Metropolis per 1,000 living from TYPHOID FEVER, DIPHTHERIA, and SCARLET FEVER for the YEARS 1883-1914 inclusive.



NOTE.—Since 1898 the necessary correction has been made for the deaths of non-residents occurring in Metropolitan Hospitals.





DIAGRAM showing ANNUAL GENERAL DEATH-RATE from all causes per 1,000 living in the Metropolis  
for the Years 1883-1914 inclusive.



NOTE.—Since 1898 the necessary correction has been made for the deaths of non-residents occurring in Metropolitan Hospitals.





## 2.—Hunter River Combined Sanitary District.

### Staff.

J. BOOTH-CLARKSON, L.R.C.P. and S. (Edin.), D.P.H. and D.T.M.H. (Camb.),  
Acting Medical Officer of Health, Hunter River Combined Sanitary District.

Senior Sanitary Inspector ... .. GEORGE H. GODFREY.

Nurse Inspector ... .. MARY E. FLETCHER.

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## REPORT OF THE ACTING MEDICAL OFFICER OF HEALTH FOR THE YEAR 1914.

JAMES BOOTH-CLARKSON, L.R.C.P. and L.R.C.S. (Edin.), D.P.H. (Camb.), D.T.M.H. (Camb.), to the Local Authorities of the Hunter River Combined Sanitary District.

Health Office, Hunter River Combined District,  
Newcastle, Dec, 16, 1915.

Gentlemen,

I have the honor to submit the following report of the work in the above District during the year 1914.

*Description.*—The Hunter River Combined Sanitary District consists of eighteen Municipalities and five Shires, and of a Police Area for dairy inspection purposes.

The population of the whole district is estimated at about 136,410.

The area is about 3,000 square miles.

The distances from Newcastle vary up to 70 miles.

*General.*—Dr. Dick proceeded to Europe on leave early in May, and arrived in England just before the present European war broke out. On this occurring he was appointed on the staff of the Lady Dudley Australian Voluntary Hospital, and proceeded with that Hospital to St. Nazaire (France). He was appointed temporarily as Major in the Royal Army Medical Corps.

I took up duties as Acting Medical Officer of Health on 6th May, 1914, having previously been Medical Inspector of North Queensland, and having held various Public Health appointments in Natal (South Africa), and during the Spanish-American War, Boer War, and Natal Native Rebellion of 1906.

While Medical Inspector of North Queensland I also acted for a time as Commissioner of Public Health and Chief Quarantine Officer, Queensland.

### ADMINISTRATION.

*Staff.*—The staff which is very small for a district of such a size and population, consists of the Medical Officer of Health, a Senior Sanitary Inspector, who is also an Inspector under the Pure Food Act, three Slaughtering Inspectors, and two Nurse Inspectors.

In

In addition each Municipality (of which there are eighteen) and each Shire (of which there are five) have their own Sanitary Inspectors, some of whom hold a certificate from the Royal Sanitary Institute, London; but a good many in addition to their office as Sanitary Inspector are also Town Clerks, Clerks of Works, Working Foremen, &c.

Table A shows the names and qualifications of the above-mentioned sanitary officers, and the additional offices held by some of them.

TABLE A.

LIST of State and other Sanitary Officers of the Hunter River Combined Sanitary District and their qualifications.

District.	Population.	Name.	Qualifications.
<i>State.</i>			
Hunter River Combined District.	.....	Dick, Robert .....	M.B., C.M. (Syd.), D.P.H. (Camb.) M.O.H.
" " .....	.....	Booth-Clarkson, J. ....	L.R.C.P. and L.R.P.S. (Edin.), D.P.H. and D.T.M.H. (Camb.), Acting M.O.
" " .....	.....	Godfrey, Geo. H. ....	Assoc. Roy. San. Inst. (Lond.).
" " .....	.....	Jurd, M. J. ....	Cert. R.S.I. and Syd. T. Col.
" " .....	.....	Bell, Richard .....	Cert. R.S.I. and Syd. T. Col.
" " .....	.....	Abberton, John .....	Cert. R.S.I. (Lond.).
" " .....	.....	Spencer, Lucy .....	Trained Nurse.
" " .....	.....	Fletcher, M. E. ....	Cert. R.S.I. (Lond.), Trained Nurse.
<i>Municipal.</i>			
Adamstown.....	2,770	Brown, Wm. ....	Also Town Clerk.
Carrington .....	2,000	Lawson, J. L. ....	Also Town Clerk.
Greta .....	1,050	North, M. ....	Also Town Clerk.
Hamilton.....	8,850	Beynon, W. J. ....	Cert. R.S.I. (Lond.).
Lambton .....	2,720	Noble, H. ....	Also Town Clerk.
Maitland, East .....	3,250	Sarginson, W. ....	
Maitland, West.....	8,630	Reay, Audley .....	Cert. R.S.I. (Lond.).
Merewether .....	4,330	Allinson, W. ....	
Newcastle .....	13,050	Lloyd, Thos. ....	Assoc. R.S.I. (Lond.).
New Lambton .....	1,850	Campbell, J. ....	Also Town Clerk.
Plattsburg.....	2,400	Stone, Geo. ....	
Raymond Terrace.....	950	Adam, A. L. ....	Also Town Clerk.
Singleton .....	3,050	Collins, W. ....	Cert. R.S.I. (Lond.).
Stockton .....	2,180	Johnson, W. ....	Cert. R.S.I. (Lond.).
Wallsend .....	3,400	Cunningham, W. ....	Assoc. R.S.I. (Lond.).
Waratah .....	4,900	Wrightson, T. ....	
Wickham.....	9,100	Fleming, P. ....	
<i>Shires.</i>			
Bolwarra .....	3,250	Wynne, J. ....	Also Shire Clerk.
Cessnock .....	25,300	Springbett, W. ....	Cert. R.S.I. (Lond.).
Lake Macquarie .....	16,500	Hoole, W. J. ....	Cert. R.S.I. (Lond.).
Port Stephens.....	4,100	Davoren, T. ....	Also Shire Engineer.
Tarro.....	6,850	Branch, Ed. ....	

Senior-Inspector George H. Godfrey, a very able, energetic, and tactful officer, is the only State Sanitary Inspector attached to the staff of the Medical Officer of Health, and consequently his duties are very diverse, as he has to make sanitary inspections (dairies 250, slaughterhouses 67, fat extractors 68, pig-keepers 77; inspector under Pure Food Act (taking samples of milk and other foods). He has frequently to act as disinfecter, and sometimes the work carries him considerably outside of his own district (Taree, &c.). He also conducts prosecutions all over his district in the various police courts.

Slaughtering Inspectors Jurd, Bell, and Abberton are employed as Meat Inspectors within the Abattoir Area. For convenience of inspection the available slaughterhouses are divided into three groups. In one, which is called the Kahibah Group, there are five premises, each doing a fairly large amount of killing; in the next, called the Sandgate Group, there are six premises; and in the next, called the Waratah Group, there are four premises.

With regard to the routine of clerical work of the Hunter River Combined Sanitary District, which is very considerable, in absence of a clerk the whole is done by the M.O.H. and Sanitary Inspector Godfrey, and the routine is as follows:—

On the receipt of notifications of infectious diseases from the local authorities (Town and Shire Clerks), they are stamped with the date of receipt and the particular disease. Details have up to the end of 1914 been entered into registers, but arrangements have now been made to inaugurate the card system for 1915.

The notifications, after being endorsed as correct in regard to their respective districts are then forwarded to the Secretary, Department of Public Health, Sydney.

Special report sheets are kept to show the incidence of infectious diseases in each Municipality or Shire monthly.

A record is kept of the milk suppliers of infected households, a special note being made of infectious disease occurring on dairy premises or milk vendors premises to facilitate prompt action.

Special



Special note is also made of any infectious disease outbreak in any of the institutions or hospitals in the district.

A special form is filled in by the Sanitary Inspector of a Municipality or Shire, where a case of typhoid fever has occurred.

Great difficulty has been experienced in keeping abreast with the Vital Statistics for the district, as up to the end of the present year, District Registrars have not complied with the Public Health Act, Part II, section 21, paragraph 2, as requested by me, by sending in monthly returns.

In January, 1915, forms will again be supplied them for this purpose, and the request repeated.

*Bacteriological Laboratory.*—There is a bacteriological laboratory in connection with the office, in which a considerable amount of work is carried out. In addition to the examination of specimens, practitioners are provided with sterile throat swabs, and vidal tubes, and the office is also a forwarding centre for sending specimens to Sydney, which there is not time to examine in the laboratory.

#### PUBLIC HEALTH WORK CARRIED OUT DURING THE YEAR.

*Buildings.*—Buildings were inspected at various parts of the district with a view to their improvement or demolition, as follows:—Stockton, 4; Waratah, 3; Hamilton, 3; Newcastle, 8; Lambton, 2; Wickham, 1; Adamstown, 3; Cessnock Shire, 3; Greta, 3; Merewether, 1.

*Garbage Depôts.*—The following were inspected during the year:—Hamilton, Wickham, Merewether, West Maitland, and Newcastle.

*Nightsoil Depôts.*—The following were inspected during the year:—Cessnock Shire, West Maitland, West Wallsend, Wallsend-Plattsburg, Wickham, Hamilton, Lambton, Adamstown.

*Sites for Nightsoil Depôts* were inspected at West Wallsend (L.M.S.) and Belmont L.M. Shire).

*Sites for Workmen's Cottages* were inspected at Moscheto Island and reported on to the Works Department.

*Unhealthy building lands.*—Large areas of land in various parts of Wickham were inspected several times, and finally charted with a view of having the same proclaimed unhealthy building land.

*Nuisances and miscellaneous complaints* were inquired into at Greta, Weston, Kurri Kurri, Merewether, Waratah, Wickham, Singleton, Lambton, Newcastle, West Maitland, East Maitland, Hamilton, Adamstown, Swansea, varying from minor complaints to nuisances under the Public Health Act.

*Hospitals.*—Several of these were visited during the year to confirm or otherwise diagnosis of smallpox.

Careful inquiry was made as to the vaccination of the staffs, and where this was found to be incomplete, steps were taken to have the omission rectified. It is satisfactory to note that all hospital staffs in the Hunter River Combined Sanitary District are now stated to be satisfactorily vaccinated.

An outbreak of diphtheria amongst the staff of the Wallsend Hospital caused a good deal of extra bacteriological work, until all affected showed a negative reaction on three successive slides.

*District Disinfection.*—In cases of scarlet fever, diphtheria, and typhoid fever, after the removal or convalescence of the patient, the local authorities' inspector is expected to visit and disinfect the house and effects by formalin spraying or other approved method, when matters are carried out according to regulations.

There is no doubt, however, that in many cases and in most of those of scarlet fever, the householders do the disinfecting with sulphur, and in my experience when disinfecting is left to the householder it means no real disinfecting at all, especially if sulphur is used.

Probably most of the disinfecting after typhoid is carried out by the local sanitary inspector, as a special "Investigation of Typhoid Fever Form" has to be filled up in these cases.

But some of the local authorities have no disinfecting plant. This, as a result of a special investigation made during the year, was found to be the case at Carrington, Greta, and New Lambton Municipalities.

Houses where cases of smallpox had been treated or from which such cases had been removed, were disinfected in this district, and in some cases out of it (Moate Farm, Coopernook, Taree), by Sanitary Inspector G. H. Godfrey, of this Department, except in a few cases where a qualified sanitary inspector to a Council having a suitable plant understood the work and carried it out.

Some of the Councils issue disinfectants free, but the way in which such free disinfectants are generally used lulls people into a sense of false security.

*Police Courts.*—Police Courts were attended on four occasions in order to give evidence.

*Examination for admission or fitness for, or retention in the Public Service.*—Thirty-four candidates were examined during the year.

*Variola.*

*Variola.*—The smallpox outbreak, which was very extended and occurred practically at all points of the compass in the district, was responsible for a very large amount of extra work for this office, in connection with the Isolation Hospital at Stockton and various visits frequently repeated to the undermentioned places in my district :—Newcastle Kurri Kurri, Wallsend, Adamstown, West Maitland, Jesmond, Dudley, Charlestown, Lambton, New Lambton, and Singleton, and to the following places outside my district :—Muswellbrook, Coopernook, Moate Farm, and Taree.

A considerable amount of work had to be discharged owing to a circular issued by the Health Department to the medical practitioners in my district in regard to eruptive diseases, which caused me to be called out very frequently to decide whether a given eruption was variola or not.

*Military Camps.*—Soon after the present European war was declared, a camp of about 1,000 troops was established at Hamilton in the racecourse. I was asked by the Senior Medical Officer in charge of the camp to inspect the sanitary arrangements, which were chiefly on the latrine trench system—this being contrary to modern military sanitation in camps of any permanency. Several reports were made on the subject, which eventually led to a satisfactory conservancy system being carried out by the Hamilton Municipal Council.

In order to prevent, as far as possible, smallpox extending to the troops, I notified the Senior Medical Officer of any cases which occurred in my district, in case any of the soldiers might have been contacts with them. This proved a wise precaution, as it led to a certain number of vaccinations in the camp. In three instances I was able to prevent men going into camp who afterwards developed smallpox.

I strongly advised vaccination of the troops, or at least that a vaccination inspection should be made for statistical purposes.

I also strongly advised anti-typhoid inoculation and later provided the Medical Officer in charge with a supply of vaccine.

*Bacteriological Laboratory.*—A large number of specimens were examined, but owing to pressure of work a considerable number of them had to be sent to the Microbiological Laboratory, Sydney.

*Reports.*—Reports were sent to local authorities and the Central Health Authority on conditions found at 150 noxious trades and 250 dairy premises, and also reports on miscellaneous sanitary matters by Sanitary Inspector Godfrey, and 256 reports were sent in by me on special and general subjects to local authorities and the Health Department.

The following matters require special attention in regard to :—

*Newcastle.*—An additional qualified Sanitary Inspector to assist the Chief Sanitary Inspector (an able and efficient officer, but overworked) as house to house visitation and reinspection cannot be carried out satisfactorily with the present staff. Sanitary Inspector

This locality is situated in Newcastle East and is in a most unsatisfactory condition as far as sanitation goes; it would seem that it cannot be connected to the sewer, but now that the duplicate pail system is being installed by the local authorities matters may improve. Frog Hollow.

It is to be hoped that the Council will strictly enforce Ordinance 45 as to seats, &c.

The by-laws regarding common lodging-houses, especially as regards the keeping of the registers should be strictly enforced. There are six in Newcastle. Common lodging-houses

(a) The punt system of taking garbage and excreta to sea is still in force in the city, and is most unsatisfactory for several reasons, viz. :— Garbage

1. The punt is obsolete.
2. Owing to weather conditions sometimes the punt cannot go out with the garbage for over a week, consequently it is a great breeder of flies.
3. Material is undoubtedly washed back to the foreshores.

(b) In a city the size and importance of Newcastle a proper garbage destructor should undoubtedly be provided for.

Newcastle is undoubtedly a rat-infested city. Any person who may choose to walk along the wharves can verify this; and until the authorities render the wharves rat-proof and the citizens wake up to their responsibilities in the matter of rat destruction, there will always be a danger of a serious plague outbreak. The only precaution taken against rat infestation at the present time is that the Navigation Department periodically set baits along the wharves, and if the bait is taken it is supposed that the rat takes it; this method gives no statistics as to the number of rats destroyed. About 3,000 destroyed rats were paid for by the Municipality. Rats.

With the exception of a few premises which are situated at too low a level, or for some other reason, practically the City of Newcastle is now sewered or the sewers are available for connection. The nonsewerable part of the city will require the pail system, and for these the local authority has been requested to provide a proper duplicate pail service—with steaming plant, &c., for cleansing the pails. Sewerage.

Several complaints were received in the earlier part of the year in regard to the emanation of smell from the various sewer vents. Several inspections were made by me, and the Chief Sanitary Inspector from Sydney (Mr. E. Cresswick) paid a visit of inspection and submitted a report to the Hunter River Water Supply and Sewerage Board, and the suggestions contained therein received the approval and attention of the Board. For several months no further complaints have been received. With



With regard to suburban sewerage the greater part of Hamilton, Wickham, and Merewether is now connected to the sewerage system.

In Hamilton and Wickham Municipalities since the sewer has been made available about 1,000 pans in each town have been converted to the sewerage system.

*Adamstown.*—Although in the near future a considerable portion of this Municipality will be able to connect on to the sewerage system, still there will be a considerable number of pans used, and it is to be hoped that the local authority will strictly enforce Ordinance 45, as to the construction of seats, floors, &c., mainly as a preventive of fly infestation.

*Carrington.*—It is improbable that Carrington will be served for some time with the sewerage system, and in the meantime the local authority should strictly enforce Ordinance 45.

*Hamilton.*—The greater part of this Municipality is now available for sewerage, and up to the end of this year about 1,000 pans have been converted to the sewer, leaving about 1,000 pans still in use.

*Maitland, East.*—There are a few cesspits still in use in this Municipality, which should be abolished, and until this is accomplished outbreaks of enteric may be expected.

*Maitland, West.*—The same remarks apply as in the case of East Maitland. The method of garbage disposal is unsatisfactory; the local authority has been communicated with in regard to the garbage tip, which requires special attention, as it is close to places where food is prepared.

*Merewether.*—Although this town is now practically sewered, there will always be about twenty or thirty pans which will require attention by the local authorities—who have been advised to arrange with an adjacent Municipality in regard to this matter.

*Morpeth.*—For many years this local authority allowed what were termed ash closets to be used. They were practically to all intents and purposes middens, or miniature cesspits. These were not allowed by the Local Government Ordinances, and this local authority was requested to substitute pans. This was eventually carried out to the satisfaction of the Health Department.

*New Lambton.*—In this Municipality the provisions of Ordinance 45 are not carried out satisfactorily, and should be more rigidly enforced by the local authority.

*Plattsburg.*—The same remarks apply as in the case of the last-mentioned, as also it does to Raymond Terrace, Stockton, Wallsend, Waratah, and Wickham, although in the case of the last two towns the sewer will be available for some parts; still the Ordinance should be enforced where necessary.

*Wickham.*—About 1,000 pans have been abolished for the sewer system, leaving about 1,300 pans still in use.

#### SHIRES.

*Bolwarra.*—There are no sanitary services in operation in this Shire. The townships of Largs and Lorne should have sanitary services, but the great difficulty is to secure sites for depôts.

*Cessnock.*—There are three sanitary services in operation in this Shire, each of which is satisfactorily conducted, but so far no attempt has been made to install a garbage system. In the towns of Cessnock, Aberdare, and Kurri Kurri this is very essential. In the matter of the creek adjoining the main street in Cessnock, nothing has yet been done towards concreting the bed of same, which is urgently required and should be taken in hand by the local authority.

*Lake Macquarie.*—There are five sanitary services in operation in this Shire; a new site has been gazetted with a view to extending a service to another town in the Shire.

*Port Stephens.*—There are no sanitary services in operation in this Shire.

*Tarro.*—There are five sanitary services in operation in this Shire.

*Ordinance 45, section 19 (a).*—Provides that nightsoil pails shall be thoroughly washed and cleansed with a steam jet before they are removed from the depôt or supplied for use on any premises. The undermentioned Councils comply with the Ordinance as regards the above:—Carrington, East Maitland, West Maitland, Plattsburg-Wallsend, Singleton, Cessnock Shire.

*Garbage Services.*—The following Councils have a garbage service:—Hamilton, Newcastle, West Maitland, and Wickham.

*Private Hospitals.*—There are 23 registered private hospitals in the Hunter River Combined District. These are at the following places respectively:—

Abermain ...	Eames, M.	Morpeth ...	King.
	Hawkins, F.		
Adamstown...	Court, D. O.	Newcastle...	McCarty, M.
			Collins, M. A.
Cessnock ...	Gordon, I.		Macdonald, M. L.
	Moran and Brennan		Gow, L. F.
Kurri Kurri...	Hestelow, M.	Singleton ...	McKnight, E.
			Schmierer, S.
Maitland (E.)	Hodges, C.		Morris, M.
(W.)	Lynch, E.		Badlor, S.
(W.)	Armson, L.		Page, A. C.
(E.)	Munt, T. A.		
(W.)	Long, M.		
(W.)	Tooze, E. E.		
(W.)	Livermore, E. E.		



## APPOINTMENT OF DEPUTY QUARANTINE OFFICER FOR NEWCASTLE.

Having consulted with the Medical Officer of Health in regard to the above appointment I resigned it as soon as could be arranged after taking over duty of Acting Medical Officer of Health, Hunter River Combined Districts, for the following reasons:—

1. The general work of the Hunter River Combined District, had increased very considerably and rendered the combination of the officers practically impossible if efficiency had to be maintained.
2. Owing to frequent answers, many of which were very urgent in view of the smallpox outbreak, either ships or smallpox cases could not have been satisfactorily attended to when the one had arrived and the other had occurred at the same time.

After my resignation of the appointment, Dr. John Harris, Government Medical Officer, Newcastle, was appointed as Deputy Quarantine Officer.

## VITAL STATISTICS.

Owing to great pressure of work these are somewhat meagre and charts are omitted.

## VARIOLA.

Table B shows the number of cases notified in the Hunter River Combined Sanitary District during the year 1914, and also the number of cases treated in hospital, also with the attack-rate and death-rate per thousand of the population, and the number of cases notified for each month of the year. There were no deaths.

TABLE B.

	Estimated Population.	Cases Notified.	Removed Hospital.	Attack Rate per 1,000.	Death Rate per 1,000.
<i>Municipalities.</i>					
Adamstown .....	2,770	2	2	·7	Nil
Carrington .....	2,600	0	0	0	0
Greta .....	1,050	0	0	0	0
Hamilton .....	8,850	0	0	0	0
Lambton .....	2,420	5	5	1·8	0
Maitland, East .....	3,250	0	0	0	0
Maitland, West .....	8,630	0	0	0	0
Merewether .....	4,330	0	0	0	0
Morpeth .....	.....	0	0	0	0
Newcastle .....	13,050	9	9	·6	0
New Lambton .....	1,850	2	2	1·1	0
Plattsburg .....	2,400	1	1	·4	0
Raymond Terrace .....	950	0	0	0	0
Singleton .....	3,050	16	16	5·4	0
Stockton .....	2,180	2	2	·9	0
Wallsend .....	3,400	2	2	·5	0
Waratah .....	4,900	0	0	0	0
Wickham .....	9,100	1	1	·1	0
<i>Shires.</i>					
Bolwarra .....	3,250	0	0	0	0
Cessnock .....	25,200	0	0	0	0
Lake Macquarie .....	16,500	6	5	·36	0
Port Stephens .....	4,100	0	0	0	0
Tarro .....	6,850	0	0	0	0

Notifications of Variola in each month :—

January ...	7	August ...	—
February ...	9	September ...	2
March 11 ...	11	October ...	8
April ...	3	November ...	—
May ...	2	December ...	—
June ...	4		
July ...	2		48

The first case in the District was a man who was a stowaway from Auckland, New Zealand, in July, 1913. He was in the Newcastle Hospital for some hours before being removed to the Stockton Isolation Hospital, but probably was not the cause of cases which occurred in connection with that institution or in connection with it later, as there were cases there more closely in time connected with later outbreaks.

There seem to have been two centres of the disease, the first in period of time being Singleton. The first case occurred in January, in which month seven cases occurred, followed by nine more in February.

The Newcastle outbreak began in March, but in no way seems to have been connected with that at Singleton.

In regard to the Singleton outbreak, a married couple proceeded there in January from Sydney, and motored around a number of friends, nearly all of whom, as far as can be

be ascertained, seem to have developed variola. These two people afterwards went to Sydney, and later were sent to the Quarantine Hospital with smallpox. There is very little doubt but that they were the origin of the Singleton cases.

These people stayed at a hotel in Newcastle *en route* for Singleton. The hotel was afterwards disinfected by Sanitary-Inspector Godfrey of this Department, but no Newcastle or Newcastle District cases have been traced to them.

*Cases.*—During January and February there were sixteen cases in Singleton, all of whom were treated in Hospital, four of them attended school.

*Incidences.*—Six houses had one case in each, two houses had two cases in each, and one house six cases.

*Mortality.*—One death occurred on 2nd March, that of an infant aged three weeks. After February the outbreak came to an end.

*Newcastle.*—What may be described as two outbreaks—though with connecting links between them—occurred in Newcastle and adjacent districts (within a radius of about 14 miles) and the Stockton Isolation Hospital was closed between the two outbreaks.

There were thirty-two cases altogether, and almost all these cases in the long run seemed traceable to two sources, viz. :—

- (1) The more outlying cases to the first case which occurred in Stockton.
- (2) The more central cases to Newcastle Hospital which originated the cases occurring at Aberdeen, to be later spoken of.

1. The first case was a man at Stockton, who combined the avocations of a coal-trimmer and bookmaker, and who, in his latter capacity, was visited by various people and also travelled about a good deal. There is no history in connection with him, but it is more than likely that he contracted the complaint from Sydney.

He was alleged to have been visited by a Charlestown resident who contracted the complaint and probably acted as a distributor of the disease through other cases to that district, which were at Charlestown, New Lambton, Adamstown, a Newcastle case, West Wallsend; and in point of fact, from that time a mild epidemic seems to have continued in those localities to October, when the last case was found traceable to this source.

2. Many cases in the urban part were traceable to what was probably a mild epidemic in Newcastle Hospital, which occurred subsequent to two cases being there for a time in March and April, before being transferred to Stockton Isolation Hospital, with smallpox. The continuity of cases was not confirmed till a case occurred at Aberdeen, to be later referred to.

3. Two cases which occurred at a restaurant in Newcastle were traceable to a man who, shortly after leaving the place, went into the Quarantine Hospital, Sydney, with smallpox. It was most difficult to trace this, as the register of the names of boarders had not been kept; but later, from a most unexpected source, the information was obtained, which, by the way, was the case with much of the information obtained, as often what may be termed the official investigation did not elicit much of value.

As a result of the measures taken, this particular outbreak ceased, and the Isolation Hospital was closed on 8th August, 1914.

*Second Outbreak.*—Two cases in one house occurred on 17th September, and the Isolation Hospital was again opened on the 18th of that month. All the cases that occurred during this period seemed to connect with the first case and were in the outlying districts.

An interesting incident was that from one house at Lambton. A case was sent to the Isolation Hospital, and all contacts were vaccinated with three marks and very successfully, but three more had to go to hospital with the disease, showing that vaccination was too late.

There were in all 32 cases (16 males and 16 females) varying in age 10 to 79 years.

Of the total, seven were attending school and (including contacts) four young men were about to join their regiments.

The same measures were again adopted, and the Isolation Hospital again closed for the second time on 23rd November, 1914.

*Cases.*—Thirty-one of the thirty-two cases were treated at the Isolation Hospital, the other case being too weak to remove from her residence.

No case was discharged under four weeks, some were in a much longer period, even extending to ten weeks.

Several were severely pitted as the result of the complaint.

A good many of the cases were very difficult to diagnose; and to begin with, my previous experience in England, and two epidemics in Natal, South Africa, did not help me very much. What was of the greatest assistance was the extremely valuable article by Dr. W. G. Armstrong, Senior Medical Officer of the New South Wales Public Health Department, on "The Recent Epidemic of Smallpox in New South Wales: its Diagnosis and Prevention," and published in the *Australasian Medical Gazette* of 2nd May, 1914. Nearly all cases in this district fulfilled all the canons of diagnosis laid down in that article, viz.:—

- (1) None of the cases had ever been vaccinated successfully before.
- (2) All the cases, except very young children, gave a history of "influenza pains."
- (3) A few days after the pains the rash appeared and was typically distributed.
- (4) On appearance of the rash the patient felt "quite well."

Of



Of all the symptoms the most valuable from a diagnostic point of view are :—

- (1) The preliminary influenza pains.
- (2) The distribution of the rash in the following order—face, extensor surfaces of arms, and leg about ankles, back, palms of hands, soles of feet, lips and inside mouth.

No cases were traceable to fomites.

It would seem that if all practitioners could have persuaded patients with supposed “influenza” pains to be vaccinated, it would have had a considerable effect in arresting the epidemic of variola.

#### *Comparison with Home and South Africa Cases.*

The cases seen here differ from other cases I have seen in the following respects :—

- (1) The rapid transition to the pustular stage, the papular and vesicular stages being very short, especially the vesicular.
- (2) The survival of cases with extensive eruptions—almost confluent—which would be expected to terminate fatally in England or South Africa.

*Incidence.*—Eighteen houses had one case in each, five two cases, and one four cases.

*Deaths.*—There were no deaths from the disease in the Newcastle District.

*Hospital.*—Of the total 48 cases, 47, or 99 per cent., were treated in Hospital.

*Vaccination.*—All the cases that occurred had not been previously successfully vaccinated within the past 10 years.

#### *Cases outside the Hunter River Combined District.*

(Taree, Coopernook, Moate Farm.)

On 3rd June, 1914, I received instructions from the Director-General to proceed to Taree to investigate a suspicious case at Coopernook (all these places are in Manning Shire). I proceeded there promptly, which was fortunate, as just after I left Newcastle, a wire arrived from the Shire Clerk, Manning Shire, stating that the case had been diagnosed as varicella (chickenpox).

On 12th June, in company with the Government Medical Officer, I went to Coopernook and found the patient, a child, with a suspicious eruption, but merely suspicious and not very advanced, but no history.

Fortunately in the course of conversation the mother of the child mentioned that the child had caught it from a cousin living at Moate Island. I decided to proceed there. A small river had to be crossed, and a boat was brought over by a small boy who undoubtedly had variola, which he announced had been got in Sydney.

On investigation, five of the family were found to have the disease, and two were found to have just come from Sydney, having lived next to a house from which a case had been removed to the Quarantine Hospital.

*Cases.*—Six cases in all. As the premises were isolated they were quarantined for six weeks and then disinfected by Sanitary Inspector Godfrey, and all persons in the vicinity vaccinated.

*Deaths.*—None.

In this case the man was a dairyman. He did not report the cases to the proper authority, and thereby rendered himself liable to prosecution under the Public Health Act and also the Dairies Supervision Act, but no action was taken.

As four children were attending school it was very satisfactory that the disease did not spread, as a most serious outbreak was threatened.

#### *Muswellbrook.*

As instructed by the Director-General I also proceeded to Muswellbrook to investigate a suspicious case.

I found the patient to be a little girl in the local hospital, where she had been removed from Aberdeen. I also saw her sister, who about a fortnight before had been a probationer for some time in Newcastle Hospital, and she had left suffering from all the symptoms of a mild variola which she had communicated to her sister.

I vaccinated this sister and the vaccination did not take, nor did it on a more recent vaccination by Dr. Hancock.

The young woman informed me that mild cases of the kind had been occurring amongst the staff of the hospital for some time. I then decided that this had probably originated in the two cases admitted there in March and April, and culminating in the wardsmid who was sent to the Isolation Hospital on 30th June.

The patient was treated in the local hospital, contacts vaccinated, and the premises at Aberdeen quarantined for fourteen days, and they were then disinfected by an officer of the Health Department and the quarantine was raised.

There were no further cases.

*Schools.*—Of the total number of cases seen fifteen were attending school, but in no case was a school infected.

*Method of Procedure.*—The means for dealing with the epidemic were :—

1. An Isolation Hospital about 3½ miles from Stockton Ferry, which was erected during the smallpox scare in 1913, and which requires a good deal of modernising (as it was only temporary in the first place). The staff consisted of Dr. A. Grieves (Stockton), visiting Medical Officer, one nurse, and one wardsmid. The



The meals were obtained from the Hospital for Insane (which is close by), under the strictest supervision.

2. An ambulance which—

- (a) Belongs to the Health Department.
- (b) Is housed (and disinfected after use) by the Newcastle Council.
- (c) The driver and horses are procured from a livery stable in Newcastle.

The ambulance is taken across to Stockton on the horse punt which plies between Newcastle and Stockton. The distance to drive if the punt were not available would be about 20 miles each way.

Nearly all the calls were through telephone either by medical practitioners or the police, as is provided for in the Public Health Act. On several occasions sundry people in the goodness of their heart started to notify verbally, but this practice was stopped by me and notifications had to be made in the proper manner as mentioned.

1. Prior to proceeding to the house of the person notified, the livery stable was notified that their services would be required.

2. The Manager of the Hospital for Insane, Stockton, was communicated with by telephone that a patient might be expected. (N.B.) The Isolation Hospital is about 300 yards distant, and is connected with a telephonette.

3. The Sanitary Inspector (if capable, otherwise the work was performed by Sanitary Inspector Godfrey) of the district where the patient resided to arrange for the disinfection of the premises and contents immediately after the patient had been removed to hospital.

4. If the case was positive and could be removed that day, the livery stable was again communicated with and the time of removal of patient, and time of punt arranged for.

The patient was then seen by me, accompanied (if possible) by the medical practitioner. The smallpox investigation form was then filled in and forwarded to the Secretary of Health Department, Sydney, and all contacts were advised to be vaccinated. In some cases they acquiesced, but in a majority of cases difficulties commenced—

- (1) The contacts did not want to be vaccinated.
- (2) They were nearly always out working, probably at different places and hours.
- (3) If I went (perhaps a distance of several miles) at an arranged hour—mostly in the evening—they managed not to be in.
- (4) And lastly and most importantly, even if vaccinated, the contacts might be in the incubation period of the disease and were let out amongst the community.

The following procedure was at last adopted by me :—

1. On hearing of a suspicious case I requested the Inspector of Police, Newcastle, by interview or telephone, to at once place an officer outside the house to be visited, and allow none to enter or leave the premises until my arrival. This prevented contacts getting away, and those who were out had to come in the evening, and so I found them on a second visit if the case was “positive.”

2. If the case was “positive”—

- (a) The case was removed to the Isolation Hospital as soon as possible.
- (b) The premises were quarantined for fourteen days.
- (c) The premises were disinfected as soon as the patient was removed, and again if another case occurred.
- (d) Practically there was very little objection taken to this system of quarantine, and it certainly seemed more effective in averting the spread of the disease.

Before raising the quarantine the people were again seen by me. No case having come under supervision gave rise to any other cases in a single instance under this method of procedure so far as was ascertained.

#### *Stockton Isolation Hospital.*

The patient once off the premises, came under the care of Dr. A. Grieves, the Medical Officer in charge, and it says a great deal for his tactful management and attention that on my inspecting visits, and especially those before each patient was discharged, I found no complaints of any kind.

The three nurses who were from time to time in charge also gave satisfaction, as did also the wardsmen.

*Vaccination.*—In the earlier part of the year, and also in 1913 when smallpox first broke out, vaccination depôts were established at Newcastle, Greta, Singleton, Wickham, Branxton, and were controlled by Dr. Dick. About 9,000 persons in all were vaccinated at these depôts. The lymph used in the earlier vaccinations does not seem to have been satisfactory, as a good many people seen by me had very poor or no marks.

Later I vaccinated all contacts without a single exception, and many contacts of varicella, and a number at a depôt opened at the Mechanics' Institute, Plattsburg, in all about 360, with very satisfactory results. In the latter there were no bad arms.

*Police Department.*—I would like to take this opportunity of thanking the Police Department for the able, prompt, and most valuable assistance during the various outbreaks.

## DIPHThERIA.

The appended table shows the number of cases in the Hunter River Combined District which were notified, also those treated in hospital, and the attack-rate and death-rate from diphtheria per thousand of the population during 1914, also the number of cases notified in each month during the year. These were ten deaths, being lowest number for the last five years.

TABLE C.

District.	Estimated Population.	Cases Notified.	Removed to Hospital.	Attack-rate per 1,000.	Death-rate per 1,000.
<i>Municipal.</i>					
Adamstown .....	2,770	6	5	2.1	.....
Carrington .....	2,600	6	5	2.3	.....
Greta .....	1,050	.....	.....	.....	.....
Hamilton .....	8,850	16	12	1.8	.....
Lambton .....	2,720	2	1	1.7	.....
Maitland, East .....	3,250	1	.....	2.3	.....
Maitland, West .....	8,630	17	14	1.9	.....
Merewether .....	4,330	4	4	.9	.....
Morpeth .....	1,080	4	4	3.7	.....
Newcastle .....	13,050	15	14	1.1	.2
New Lambton.....	1,850	4	2	2.1	.....
Plattsburg .....	2,400	.....	.....	.....	.....
Raymond Terrace .....	950	.....	.....	.....	.....
Singleton.....	3,050	11	7	3.6	.....
Stockton .....	2,180	1	1	.4	.....
Wallsend .....	3,400	4	3	1.1	.8
Waratah .....	4,900	7	5	1.4	.....
Wickham .....	9,100	30	23	3.3	.1
<i>Shires.</i>					
Bolwarra .....	3,250	.....	.....	.....	.....
Cessnock .....	25,300	27	12	1.07	.....
Lake Macquarie .....	16,500	9	5	.5	.05
Port Stephens .....	4,100	4	.....	.90	.....
Tarro .....	6,850	1	.....	.1	.2

*Notifications of disease for each month.*—January, 15; February, 22; March, 14; April, 16; May, 13; June, 17; July, 15; August, 20; September, 8; October, 12; November, 5; December, 14; a total of 171 cases for the year.

*Incidence.*—The year 1914 was the sixth year during which diphtheria has been prevalent in the Hunter River Combined District. It is, however, satisfactory to note that a smaller number of cases were notified than in any year during that period, viz., 171 (Municipal 130, and Shires 41).

In the previous five years the notifications numbered as follows:—1909, 184; 1910, 373; 1911, 210; 1912, 177; 1913, 189.

The highest number of cases occurred in February and August, the lowest in September and November.

All Municipalities reported cases except Greta, Plattsburg, and Raymond Terrace, and from all the Shires except Bolwarra.

One hundred and thirty houses had one case each, sixteen two cases, and three houses had three cases in each.

*Schools.*—Of those attacked, fifty-eight attended at various public schools in the district.

*Milk Supply.*—The milk supply is carefully noted. One case originated in a dairy, which, however, did not supply any of the attacked families.

There was no evidence to connect cases with their milk supply.

Two of the cases consumed no milk, eight owned their own cows, and seventeen used condensed milk.

*Wallsend Hospital.*—In July swabs sent to this office showed that a wardsmen at the Wallsend Hospital was suffering from diphtheria and shortly after a nurse and the matron became affected.

Swabs were taken of the staff and examined by me which showed that out of a staff of seventeen, five (excluding the cases) were “diphtheria carriers.”

Suitable measures were advised and swabs examined weekly till the end of October, when they became “negative” after three examinations of each.

*District Nurse.*—On 11th December, one of the District Nurse Inspectors was found to be suffering from diphtheria, caught in the discharge of her duties, and being probably run down at the same time by study in connection with an examination for a certificate under the Royal San. Inst. (Lond.). She was treated in the Newcastle Hospital till 2nd January, when three negative swabs being examined she went to Sydney on sick leave. As Nurse Inspector Fletcher had been removed this was a loss to the district work till the latter resumed duty on 21st December, 1914.

*Causes.*—In a somewhat extensive anti-diphtheria campaign, I had to conduct in the Mackay District of North Queensland in 1913, where about 1,300 “carriers” were detected, it was found that the chief causes of infection were kissing, domestic articles (such



(such as cups), towels, common school cups, pens, pencils, slates, unboiled laundry, toys (teddy bears), and not unfrequently the carelessness of parents in allowing their children to visit families with diphtheria.

The only remedy for the above dangers seems to be as in infectious diseases generally the education of the public in hygienic matters.

*Hospital*.—Out of 171 cases notified, 117 or 68·4 per cent. received hospital treatment.

#### SCARLET FEVER.

Table D of this report shows the number of cases of scarlet fever notified in the Hunter River Combined District, the number treated in hospitals, and also the attack rate and death rates per 1,000 of the population for 1914, followed by number of cases notified for each month of the year. One death reported being apparently the first for five years.

TABLE D.

District.	Estimated Population.	Cases Notified.	Removed to Hospital.	Attack-rate per 1,000.	Death-rate per 1,000.
<i>Municipal.</i>					
Adamstown .....	2,770	6	1	2·1	0
Carrington .....	2,600	13	1	·5	0
Greta .....	1,050	.....	.....	.....	0
Hamilton .....	8,850	23	.....	2·6	0
Lambton .....	2,720	3	.....	1·1	0
Maitland, East .....	3,250	1	.....	·3	0
Maitland, West .....	8,630	6	.....	0	.....
Merewether .....	4,330	34	2	7·8	0
Morpeth .....	1,080	.....	.....	·7	.....
Newcastle .....	13,050	28	7	2·1	0
New Lambton .....	1,850	.....	.....	0	0
Plattsburg .....	2,400	7	.....	2·9	0
Raymond Terrace .....	950	.....	.....	.....	.....
Singleton .....	3,050	41	4	13·4	.....
Stockton .....	2,180	4	.....	1·8	.....
Wallsend .....	3,400	14	.....	4·1	.....
Waratah .....	4,900	15	.....	3·08	.....
Wickham .....	9,100	23	2	2·5	.....
<i>Shires.</i>					
Bolwarra .....	3,250	.....	.....	.....	.....
Cessnock .....	25,300	50	.....	1·9	·03
Lake Macquarie .....	16,500	39	.....	2·3	.....
Port Stephens .....	4,100	1	.....	·2	.....
Tarro .....	6,850	10	.....	1·4	.....

*Notifications of Scarlet Fever for each Month*.—January, 12; February, 26; March, 35; April, 32; May, 23; June, 34; July, 39; August, 29; September, 19; October, 24; November, 22; December, 26. A total of 321 cases for the year.

*Incidence*.—In the year 1914 the scarlet fever notifications (321) were the highest number since 1909 and 1910; of these 221 were from fourteen Municipalities and 100 from four Shires. In four of the municipalities of the district and one shire there were no cases of scarlet fever notified, viz., Municipalities of Greta, Morpeth, New Lambton, and Raymond Terrace, and the Shire of Bolwarra.

In the previous five years the number of notifications received were in 1909, 363; 1910, 572; 1911, 264; 1912, 113; 1913, 110.

The highest number of cases occurred in March, April, June, and July. January and September being the lowest.

Cases were reported from all the municipalities except Greta, Morpeth, New Lambton, and Raymond Terrace, and all shires except Bolwarra.

*Houses*.—One hundred and seventy-two had one case in each, fifty-two had two cases in each, and fifteen had three cases in each.

*Schools*.—Of those attacked, 168 were attending one or other of the schools in the district.

*Milk Supply*.—Six of those attacked claimed to use no milk, twenty-four owned cows, twenty used condensed milk. Dairies supplied the remainder, but in no case seemed to be a cause of the disease.

One case occurred at a dairy which was not reported as supplying other cases.

*Hospital Treatment*.—Of the 321 notified cases, 22 or 6·8 per cent. received hospital treatment.

There would seem to be no very satisfactory explanation as to why scarlet fever, having caused only 113 cases in 1912, and 110 in 1913, should have caused 321 in 1914.

There is, however, no doubt that being a mild complaint at present, very few precautions are taken, and if it is to be stamped out much greater care will have to be taken in disinfecting premises and contents.

At present in this district there is very little, if any, disinfecting done after a scarlet fever case by the local authority, and, if done, it is by the householders who know very little about it. According to statute a medical practitioner is supposed to certify that he is satisfied with the process of disinfection, but it is difficult to believe that the medical practitioners of the district were satisfied with 277 houses disinfected by the sulphur process.



## TYPHOID FEVER.

Table E shows the number of cases of typhoid fever notified in the Hunter River Combined Districts, the numbers treated in hospital, and also the attack and death rates per thousand of the population during the year 1914, followed by the number of cases notified for each month of the year. There were sixteen deaths, being the average for the last five years.

TABLE E.

District.	Estimated Population.	Cases Notified.	Removed to Hospital.	Attack-rate per 1,000.	Death-rate per 1,000.
<i>Municipalities.</i>					
Adamstown .....	2,770	3	.....	·1	0
Carrington .....	2,600	2	1	·7	0
Greta .....	1,050	4	3	3·8	0
Hamilton .....	8,850	8	4	·9	0
Lambton .....	2,720	6	.....	2·2	0
Maitland, East .....	3,205	15	11	.....	0
Maitland, West .....	8,630	6	3	·6	·7
Merewether .....	4,330	2	2	·4	0
Morpeth .....	1,080	.....	.....	·0	0
Newcastle .....	13,050	11	9	·8	·2
New Lambton.....	1,850	1	.....	·5	0
Plattsburg .....	2,400	12	2	·5	.....
Raymond Terrace .....	950	.....	.....	.....	.....
Singleton .....	3,050	13	11	·4	.....
Stockton .....	2,180	.....	.....	·0	0
Wallsend .....	3,400	15	7	·4	·5
Waratah .....	4,900	8	1	1·6	0
Wickham .....	9,100	6	6	·6	0
<i>Shires.</i>					
Bolwarra .....	3,250	1	1	.....	.....
Cessnock .....	25,300	22	12	·4	·03
Lake Macquarie .....	16,500	8	3	·4	·06
Port Stephens .....	4,100	1	1	·2	.....
Tarro .....	6,850	6	2	·7	·1

*Notifications of Typhoid Fever for each Month.*—January, 21; February, 17; March, 29; April, 13; May, 8; June, 4; July, 5; August, 5; September, 1; October, 8; November, 10; December, 29. A total of 150 cases.

*Incidence.*—Of the total 150 cases notified during the year, 113 were notified from fifteen of the municipalities and thirty-eight from the five shires. This was the highest number since 1910, the notifications during the previous five years being:—1090, 237; 1910, 154; 1911, 131; 1912, 132; 1913, 121.

The highest number of cases occurred in January, February, March, April, and December, which months are coincident with the “fly and dust” season, the lowest in September when one case was notified.

With the exception of Morpeth, Raymond Terrace, and Stockton, cases were reported from all the municipal districts, and cases were reported from all the shires.

*House.*—One hundred and thirty had one case in each, and sixteen had two cases in each.

*Schools.*—Of those attacked fifty-five were attending one or other of the schools in the district.

*Milk Supply.*—No cases occurred in connection with a dairy, and no dairy seemed to be the origin of any cases.

Of the total cases twelve owned cows, eighteen used condensed milk, and ten were stated not to use milk at all.

*Hospital Treatment.*—Of the 150 cases 78, or about 50 per cent., received hospital treatment.

*East Maitland.*—In December a special investigation was made of an outbreak at High-street, East Maitland, where typhoid seems to have been more or less prevalent for several years.

There was no reason for the outbreak as far as the conditions of the site *per se*, but its history was unsatisfactory, and owing to that and other satisfactory conditions in the vicinity connected with the Railway Station and the Gaol, I advised that, in addition to the usual anti-typhoid precautions, the people in the vicinity should be advised to be inoculated.

*Inoculation at Military Camp, Newcastle.*—I received unofficial information, after providing the military authorities with vaccine, that 100 men were inoculated once, but there was a considerable reduction after as only about thirty received a second inoculation, and very few a third. Amongst the 100 were six officers, all of whom were inoculated a third time.

The above shows the difficulty of getting this work done even in a thoroughly organised and disciplined body, and supports the opinion I have previously stated that the only way to carry out inoculation in a general community would be by the people being inoculated by their own practitioners, who could arrange for the requisite three inoculations, as a single can only be effective temporarily.

Widal

*Widal reaction.*—It is worth considering whether the increasing reliance for a diagnosis of typhoid fever on this reaction may not be a danger to the health of the public, especially in view of the fact that a “positive” reaction usually cannot be obtained for at least a week, that some cases give no reaction and that some of the most severe do not give a positive reaction at all.

If the blood specimen is sent for examination probably no special precautions are taken in many cases, as such instructions are difficult to carry out in any really uniform way, and are troublesome to the patient’s family till the result has been received.

Should the report be negative, which—with all the possible sources of error—proves nothing, then the case is decided not to be typhoid with possible disastrous results.

It would seem that all cases which are sufficiently serious to warrant a blood specimen being sent for examination should be considered sufficiently dangerous to the public to warrant all precautions being taken which typhoid fever requires, and that where the clinical symptoms indicate typhoid or diphtheria the cases should be treated accordingly.

INFANTILE PARALYSIS.

Two cases of this disease were notified during the year, one from the Royal Alexandria Hospital, Sydney, as being from Hamilton Municipal District, and one case from Cessnock Shire.

Both these cases were notified in May, and in the former, a male, 3½ years of age, and in the latter, male of 3 years of age.

MALARIA.

About the middle of the year I sent in a report in regard to the possible spread of malaria in New South Wales from cases returning to or newly arriving in the State from malaria infested countries.

TUBERCULOSIS.

*Phthisis.*—This disease is not notifiable in Newcastle or any part of the Hunter River Combined District.

I understand it was intended to establish a tuberculosis dispensary in Newcastle, but as I have received no communication of any kind on the subject, I am unable to report as to how the matter has progressed.

*Deaths.*—There were forty-eight from phthisis in the whole district and nine from other tubercular diseases.

INFANTILE MORTALITY.

TABLE E 21.

CAUSES of Infantile Mortality (deaths of infants under one year), 1914.

Causes of Death.	Total.	Municipalities.																Shires.						
		Adamstown.	Carrington.	Greta.	Hamilton.	Lambton.	Maitland, East.	Maitland, West.	Merewether.	Morpeth.	Newcastle.	New Lambton.	Plattsburg.	Raymond Terrace.	Singleton.	Stockton.	Wallsend.	Waratah.	Wickham.	Bolwarra.	Cessnock.	Lake Macquarie.	Port Stephens.	Tarro.
Whooping-cough .....	5	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	2	...	...
Influenza .....	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	2	...	...	...	...	...
Erysipelas .....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tubercular Meningitis .....	3	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Other Tubercular Diseases .....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other General Diseases .....	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
Meningitis .....	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions .....	14	...	...	...	1	...	...	1	1	...	1	...	1	1	...	...	...	...	...	...	3	5	...	...
Hydrocephalus .....	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of the Lymphatic System .....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Bronchitis .....	12	...	...	...	...	1	...	2	1	...	2	1	...	...	...	1	2	...	...	...	1	2	...	...
Pneumonia .....	22	...	1	...	...	2	1	3	1	1	1	...	1	...	...	3	1	2	...	3	1	...	...	2
Pulmonary Congestion .....	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of the Stomach .....	4	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...
Diarrhoea and Enteritis .....	85	1	4	...	3	2	1	7	6	...	7	...	5	...	4	...	4	4	...	8	3	18	5	1
Hernia, Intestinal Obstruction .....	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...
Other Diseases of the Digestive System .....	3	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bright's Disease (Acute and Chronic) .....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Prematurity .....	93	3	...	...	6	2	2	8	7	...	8	...	2	...	2	...	2	...	13	...	25	5	1	6
Developmental Diseases .....	60	3	3	1	6	...	2	2	2	...	9	...	4	...	...	1	...	2	3	...	7	14	...	...
Accident .....	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
All other causes .....	3	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...
Total .....	322	7	9	3	20	5	9	23	20	1	30	2	13	1	9	1	10	12	28	3	65	36	2	13
Infantile Mortality Rate, Deaths under one per 1,000 Births.	...	81	105	64	60	40	76	87	100	23	88	30	143	32	39	12	46	61	74	48	78	72	24	70



TABLE E 2.

PRINCIPAL Causes of Deaths in each Municipality, with deaths in Institution.

Causes of Death.	Age periods—Metropolis.										Municipalities.																Shires.			Total.	Deaths in Public Institutions.				
	All Ages.	Under 1 year.	1-4 years.	5-14 years.	14-19 years.	20-29 years.	30-39 years.	40-49 years.	50-64 years.	65 years and over.	Adamstown.	Carrington.	Greta.	Hamilton.	Lambton.	Maitland East.	Maitland West.	Merewether.	Morpeth.	Newcastle.	New Lambton.	Plattsburg.	Raymond Terrace.	Singleton.	Stockton.	Wallsend.	Waratah.	Wickham.	Telwarra.			Cessnock.	Lake Macquarie.	Port Stephens.	Tarro.
Typhoid Fever	16	1	1	2	4	4	5	1	...	...	...	...	...	...	...	...	3	...	3	...	...	...	...	...	...	...	...	...	1	1	...	1	16	13	
Scarlet Fever	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Whooping-cough	8	5	7	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria	10	1	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Influenza	8	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Erysipelas	4	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Epidemic Diseases	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Phthisis	48	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Tubercular Meningitis	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Tubercular Diseases	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cancer	82	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diabetes	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Alcoholism	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other General Diseases	42	3	1	8	2	4	3	3	8	10	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Meningitis	11	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cerebro-spinal Meningitis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cerebral Hæmorrhage	46	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Convulsions	18	14	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Diseases of the Nervous System	43	1	...	6	2	2	1	2	11	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diseases of the Heart	99	...	3	...	2	5	16	22	51	3	3	2	4	3	7	5	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Diseases of the Circulatory System	31	1	...	...	...	1	4	8	16	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Bronchitis	47	12	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pneumonia	71	22	20	2	1	3	4	2	6	21	2	5	1	1	4	9	5	1	9	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Diseases of the Respiratory System	15	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diseases of the Stomach	13	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diarrhœa and Enteritis	129	85	26	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Appendicitis	10	...	1	2	2	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Hæma, Intestinal Obstruction	18	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cirrhosis of the Liver	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Peritonitis	5	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Diseases of the Digestive System	14	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Bright's Disease (Acute and Chronic)	42	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Genito Urinary Diseases	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Puerperal Septicæmia	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Puerperal Diseases	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Prematurity	93	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Developmental Diseases	61	60	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Senility	75	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Suicide	21	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Accident	89	2	10	9	2	20	11	10	18	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
All other causes	24	3	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Total Deaths	1286	322	97	48	23	93	79	88	188	348	25	28	9	62	27	37	123	60	3	229	11	29	8	27	30	55	54	75	16	169	125	19	65	1286	*

There were 4,487 births and 322 deaths—the infantile mortality rate being 70·1, which seems to be the lowest rate for the last five years, which is nearly the same as for the whole of New South Wales, the latter being 69·7.

*Deaths.*—1,286, or death rate of 9·3 per 1,000, as compared with New South Wales 10·13 per 1,000. This is the corrected death rate.

**Births.**—Total births, 4,487, or a birth rate of 36·6 per 1,000, as compared with a birth rate of 28·93 for New South Wales.

## DISTRICT NURSE INSPECTORS.

Early in July district visiting by a staff of two district nurse inspectors was inaugurated.

Two nurses, viz., Sister Gould and Nurse Spencer, who are attached to the Health Department, were sent from Sydney to organise the work. After staying here about a month Sister Gould was recalled to Sydney in connection with the Red Cross movement, and Nurse Fletcher was sent here in her place.

The duties of the nurse inspectors are to ascertain the addresses of newly-born babies in their respective districts, and visit the homes as soon as possible to give advice on the feeding and care of infants, and to leave pamphlets on the subjects.

They have been especially welcomed by mothers of first infants, who are very glad of advice as to the care of themselves as well as the infants.

The nurses report among other items :—

1. In Newcastle City a lot of the houses are overcrowded, as two and sometimes three families are found living in the one house. It is hard, however, to get a correct idea of the number of rooms to families, as the answer is often misleading, owing to the fear of being troubled by local authorities for overcrowding.



2. In the case of breast-fed children most of the sickness is caused by constipation of mothers. This seems to cause the babies to be ailing and cross, probably from flatulence, when to keep them quiet the mothers over feed the infants. In regard to these and other cases an attempt is made to get at the root of the evil by advising mothers as to their own care.
3. The work of the nurses is rendered particularly difficult, and a good deal of time is lost owing to the fact that addresses are not accurately taken down by the Registrars, even where the streets are named and the houses numbered, let alone in localities where they are not, and in some cases the name of the nearest suburb alone is given.

In fact one is impressed with the fact that any genealogical research in the Newcastle District would be a most difficult, if not an impossible, matter.

The distances between houses in the suburbs is again very great.

The general condition of work for the Nurse Inspector in this district is very arduous as compared with the work in the metropolis, where the facilities for transport are much better. As the tram service cannot be utilised to any great extent, a considerable amount of walking is imperative.

As reported under diphtheria, Nurse Spencer contracted diphtheria while engaged in the work of visiting, and had to go into Newcastle Hospital.

Nurse Fletcher (who by the way had been transferred to Sydney on Miss Gould going to the front), was sent up to take Nurse Spencer's place while she was away on sick leave, was able to study for and pass the examination for the certificate of the Royal Sanitary Institute, London.

From 8th July, 1914, to 31st December, 1914, 914 visits were made to 788 infants, of which 711 were breast-fed, 69 were partly breast-fed, and 24 were not breast-fed.

#### LABORATORY WORK.

Table F shows the amount of bacteriological work done during the year in addition to which thirty-four miscellaneous specimens were examined :—

TABLE F.

Kind.	Positive.	Negative.	Total.
Typhoid (Widal) .....	34	54	88
Diphtheria Swabs .....	80	122	202
Tubercle bacilli (Sputum) .....	4	22	26

This, however, did not cover anything like what may be called the greater part of the work of the laboratory.

For some reason which is rather difficult to understand, many of the hospitals and practitioners seem to have been provided on request with sterilised throat swabs and widal tubes, and the sterilising of the swabs and distribution of same has taken up a great deal of time and interfered with work at important moments, and the custom which holds good of practitioners and hospitals forwarding specimens to be sent on to the Bureau of Microbiology—often packed in a very peculiar way (for instance, one practitioner sent a specimen of sputum in a small 2 oz. tobacco tin), and quite unsuitable for travelling, has added considerably to the work, and to waste of material and stamps.

#### DAIRIES.

During the year, 106 registered dairies within fifteen municipal districts were inspected and reported on to the different local authorities, and a copy of each report sent on to the Health Department, Sydney.

In addition to the dairies situated in the municipal districts, ninety-eight registered dairies situated in the Newcastle Police District were inspected and reported on by Sanitary Inspector G. H. Godfrey (Ass. Roy. San. Inst., Lond.), whilst the District Dairy Inspector (Mr. W. Mackie) inspected and reported on the 464 dairy premises in the Maitland Police District, and 395 premises in the Raymond Terrace Police District.

These inspections are really carried out from this office in order to test the efficiency of local authorities in carrying out the administration of the Dairies Supervision Act in my district.

The following table will show the classification of the different dairies as to good or fair, and also will show the number of cattle examined, and those destroyed as diseased :—

TABLE G.

Districts.	Total Number of Dairies.	General State.		Total Number of Cattle.	Number Destroyed.			
		Good.	Fair.		Tuberculosis.	Actinomycosis.	Cancer.	Other Diseases.
Adamstown .....	3	2	1	19	.....	.....	.....	.....
Greta .....	4	3	1	38	.....	.....	.....	.....
Hamilton .....	4	3	1	35	.....	.....	.....	.....
Lambton .....	3	3	.....	8	.....	.....	.....	.....
Maitland, East.....	21	20	1	348	.....	.....	.....	.....
Maitland, West.....	23	22	1	467	.....	.....	.....	.....
Merewether .....	3	3	.....	30	.....	.....	.....	.....
Morpeth .....	4	3	1	20	.....	.....	.....	.....
Newcastle .....	2	1	1	14	.....	.....	.....	.....
New Lambton .....	3	2	1	54	.....	.....	.....	.....
Plattsburg .....	7	7	.....	73	.....	.....	.....	.....
Raymond Terrace .....	1	1	.....	4	.....	.....	.....	.....
Singleton .....	16	16	.....	18	.....	.....	.....	.....
Wallsend .....	8	3	5	40	.....	1	.....	.....
Waratah .....	4	1	3	25	.....	.....	.....	.....
<i>Police.</i>								
Maitland (Portion of) .....	464	348	115	11,361	9	3	1	3
Newcastle .....	102	91	11	2,112	3	2	.....	.....
Raymond Terrace (Portion of) .....	395	260	124	10,251	85	20	10	2

## NOXIOUS TRADES.

The Noxious Trades Act was extended to this district in 1901. The table appended shows the number and different kinds of business carried on in the various districts during the year 1914 :—

TABLE H.

Districts.	Fat Extractors.	Pig Keepers.	Rag Picker.
<i>Municipal.</i>			
Adamstown .....	1	2	.....
Greta .....	1	1	.....
Hamilton .....	.....	1	.....
Maitland, West.....	1	1	.....
Merewether .....	.....	1	.....
New Lambton .....	2	3	.....
Plattsburg .....	2	3	.....
Waratah .....	1	4	.....
Wickham .....	.....	.....	1
Wallsend .....	.....	1	.....
<i>Shires.</i>			
Bolwarra .....	4	4	.....
Cessnock .....	24	24	.....
Lake Macquarie .....	11	13	.....
Port Stephens .....	5	5	.....
Tarro .....	18	16	.....
	70	79	1

At the extension of the Act to this district in 1901, there were seventy-two licenses issued, compared with the 150 in 1914.

Some of the pig-keepers also carry on poultry farming in connection with pig-keeping.

All the above Noxious Trades premises have been visited at intervals during the year, and reports forwarded to the local authorities concerned, and also to the Health Department, Sydney, pointing out any improvements necessary.

During the year proceedings were taken against four noxious traders for breaches of the regulations, by Sanitary Inspector Godfrey, and fines and costs totalling £21 15s. 7d. were imposed, the cases being heard at Newcastle, Waratah, Teralba, and Kurri Kurri (Cessnock Shire).

## PROSECUTIONS UNDERTAKEN BY THE LOCAL AUTHORITIES DURING THE YEAR 1914 AS REGARDS PUBLIC HEALTH MATTERS.

The local authorities of my district have the power to enforce Public Health Matters under the undermentioned Acts :—Pure Food Act, Public Health Act, Dairies Supervision Act, Noxious Trades Act, Cattle Slaughtering Act, and the following Local Government Ordinances :—39 (Public Health), 45 (Pans and closets, &c.), 56 (Meat), 57 (Fish and Game).



As will be seen from Table I., these powers have been honoured more in the breach than in the observance.

The Board of Health, when the Pure Food Act came into operation, by circular, requested the local authorities in my district to nominate an officer who would be appointed an inspector under the Pure Food Act to carry out certain sections of that Act in regard to the taking of samples of milk for analysis, and enforcing cleanliness of premises where foodstuffs are prepared or sold, or stored for sale. With the exception of two all the municipal sanitary inspectors were appointed as officers under the Pure Food Act.

TABLE I.  
LIST of prosecutions undertaken by local authorities during 1914, in matters regarding the Public Health.

District.	Pure Food.	Public Health.	Dairy Supervision.	Noxious Trades.	Cattle Slaughtering Act.	Ord. 39.	Ord. 45.	Ord. 56.	Ord. 57.
Adamstown .....	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Carrington .....	"	"	"	"	"	"	"	"	"
Greta .....	"	"	"	"	"	"	"	"	"
Hamilton .....	"	"	"	"	"	"	"	"	"
Lambton .....	"	"	"	"	"	"	"	"	"
Maitland, East .....	"	"	"	"	"	"	"	"	"
Maitland, West .....	5	"	"	"	"	5	1	"	"
Merewether .....	Nil	"	"	"	"	Nil	Nil	"	"
Morpeth .....	"	"	"	"	"	"	"	"	"
Newcastle .....	"	"	"	"	"	4	"	"	"
New Lambton .....	"	"	"	"	"	Nil	"	"	"
Plattsburg .....	"	"	"	"	"	"	"	"	"
Raymond Terrace .....	"	"	"	"	"	"	"	"	"
Singleton .....	2	"	"	"	"	"	"	"	"
Stockton .....	Nil	"	"	"	"	"	"	"	"
Wallsend .....	"	"	"	"	"	"	"	"	"
Waratah .....	"	"	"	1	"	"	"	"	"
Wickham .....	"	"	"	Nil	"	"	"	"	"
Bolwarra Shires .....	"	"	"	"	"	"	"	"	"
Cessnock .....	"	"	"	3	"	1	"	"	1
Lake Macquarie .....	"	"	"	1	1	1	"	2	1
Port Stephens .....	"	"	"	Nil	Nil	Nil	"	Nil	Nil
Tarro .....	"	"	"	"	"	"	"	"	"

The above table shows that the councils do not seem to have availed themselves of these powers, as in the whole of the eighteen municipal districts, the only prosecutions reported are from West Maitland with five, and Singleton with two for the whole year.

In the city of Newcastle the local authority has undertaken no prosecutions for the year, and has taken no samples of milk for analysis.

It would certainly seem that the local authorities of a city of some 15,000 people should have taken some action under this most important section, and more especially as the work of the Department's Inspectors show that constant and strict supervision is necessary at all times.

Table I also shows that the only prosecutions undertaken by Municipal Councils and Shire Councils under the Pure Food Act were by those who employ qualified Sanitary Inspectors, who, by virtue of holding the Certificate of the Royal Sanitary Institute, London, are receiving a moiety of their salary from the Government.

Referring to the above it may be mentioned that there is a strong tendency on the part of local authorities to shelve most of the work which would entail a prosecution on to the officials of Health Department. During the year I have been requested on several occasions to inspect premises in order that action might be taken under the Public Health Act, when the same could easily have been undertaken by the local authorities under their own ordinances.

In these circumstances I have always endeavoured to encourage the local authorities to carry out what may be considered their own work, and so not add unnecessarily to the work of an understaffed office.

#### PURE FOOD ACT.

Samples under the above Act taken in the Hunter River Combined Sanitary District by Sanitary Inspector Godfrey :—

*Milk*, 53, of which some were taken at Cessnock, Kurri Kurri, Hamilton, Wickham, Stockton, Port Stephens Shire, and Newcastle. Sherry, 1; port, 1; tonic ale, 2, all taken in Cessnock Shire.

One prosecution and fines and costs, £2 6s., were imposed, and one case withdrawn as it was against the same vendor on the same day. The



The following prosecutions were taken in hand by Inspector Godfrey under the same Act, Regulation 17, *i.e.*, Dirty Premises :—

One butcher for carrying matter liable to affect the wholesomeness of food—fines and costs, £2 6s.

One butcher dirty premises (£2 6s.).

One butcher dirty premises (£4 6s.).

Thirteen notices were served to lay on water for glass-washing purposes at refreshment rooms, &c.

An inspection in company with Inspector Francis, of the Health Department Sydney, was made of all bakeries and small-goods premises in my district, *re* the making of them fly-proof. Several prosecutions were successfully carried out by Inspector Francis, at which Inspector Godfrey attended and gave evidence. These will be found on Table K.

The following table shows the amount of work carried out by Departmental Officers from Sydney :—

TABLE J.  
*Milk Samples.*

Number.	Warnings.	Prosecutions.	Fines and Costs.
105 .....	7	17	£48 16 0

*Food and Drug Samples.*

Number and Article.	Warnings.	Prosecutions.	Fines and Costs.
			£ s. d.
3 Baking Powder .....	.....	.....	.....
10 Butter .....	.....	.....	.....
13 Drugs .....	3	2	3 2 0
2 Edible Oils .....	1	.....	.....
2 Flour .....	.....	.....	.....
1 Wine.....	.....	.....	.....
31 .....	4	2	£3 2 0

TABLE K.  
*Goods Seized and Destroyed.*

Food.	Quantity.	Reason Destroyed.	Prosecutions.	Fines and Costs.
				£ s. d.
Barley .....	5 ewt. ...	Deteriorated	.....	.....
Butter .....	20 lbs. ...	„	1	15 6 0
Fish (Dried).....	5 ewt. ...	„	.....	.....
Fish (Tinned).....	10,125 tins ...	.....	.....	.....
Invalids' Food.....	580 tins ...	.....	.....	.....
Jam .....	2,400 tins ...	.....	.....	.....
Pickles .....	200 bottles	.....	.....	.....
Preserved Fruit .....	70 lbs. ...	.....	.....	.....
Preserved Meat .....	96 tins ...	.....	1	15 6 0
Treacle .....	20 tins ...	.....	.....	.....

*Premises.*

Number Inspected.	Notices Served.	Prosecutions.	Fines and Costs.
174 .....	74	10	£66 0 0

*General Breaches.*

1 breach .....	1 prosecution.	Fines and costs, £2 6s.
----------------	----------------	-------------------------

Inspector Godfrey also seized and destroyed, as deteriorated, twenty-seven cases of sardines, each containing 100 tins, two sides of bacon, and three hams, at Newcastle.

Inspector Lloyd (Newcastle Council) seized and destroyed, as unfit for food, eleven baskets and three boxes of fish.

Inspector Edwards (Fisheries Department) who is also an Inspector under the Pure Food Act, seized and destroyed the following as unfit for food, during the year, at Newcastle :—

Sixty-three baskets of fish, seventeen crayfish, and five dozen smoked fish.

*Slaughter-ring ]*

*Slaughtering Premises and Meat Inspection.*—There were twelve premises licensed during the year ending 1914 in the Municipal Districts, and fifty-nine premises licensed in the Shire areas. In the abattoir area, which extends to a radius of 14 miles from the Newcastle Post Office, there were forty-six licenses issued in respect of twenty-six premises, which is accounted for by the fact that three or perhaps four butchers may kill at the one slaughter-houses, although each must have a separate license to kill. All of these seventy-one slaughter-houses were inspected and reported on to the Local Authorities concerned as to efficiency. Generally speaking the premises were found in a clean condition.

The following table shows the number of animals slaughtered for human food in the licensed slaughter-houses in the district during the year 1914 :—

TABLE L.

	Bullocks.	Calves.	Cows.	Pigs.	Sheep.
<i>Municipal.</i>					
Adamstown .....	49	63	529	85	1,713
Greta .....	71	4	194	22	583
Maitland, West .....	74	.....	30	15	221
New Lambton .....	702	160	764	164	5,724
Plattsburg .....	801	185	767	328	6,413
Waratah .....	2,552	590	3,484	1,410	20,506
Newcastle Wharf .....	.....	.....	.....	236	.....
<i>Shires.</i>					
Bolwarra .....	102	5	776	42	676 <sup>a</sup>
Cessnock .....	4,071	772	2,394	2,994	16,588
Lake Macquarie .....	3,923	998	5,410	1,662	34,896
Port Stephens .....	863	36	590	20	3,157
Tarro .....	6,573	688	3,481	3,617	47,208
	19,781	3,503	18,419	10,595	137,685

In that part of my district which is part of the Abattoir Area, and called for convenience, the Meat Inspection Area, which consists of sixteen slaughter-houses, there are three meat inspectors employed by the Department of Public Health. The number of animals killed and examined, and the totals condemned for disease and other conditions by these three inspectors are set out in the table below.

Outside of the inspection area in the district the present system of meat inspection is far from satisfactory. It consists in the occasional visit to the killing-house of an officer of the local authority of the district on which the slaughtering premises are placed.

The following table shows the number of animals (cattle and swine) killed, and the number of carcasses condemned as diseased and unfit for food at the slaughter-houses in the Newcastle Meat Inspection District, and those at the slaughter-houses in the remaining portions of the Hunter River Combined District during the year 1914 :—

TABLE M.

	Numbers Slaughtered.		Condemned as Diseased.			
			Numbers.		Percentages.	
	Cattle.	Swine.	Cattle.	Swine.	Cattle.	Swine.
Newcastle Meat Inspection District .....	25,136	6,129	188	27	·74	·44
All other parts of the Hunter River Combined District .....	17,705	4,230	66	9	·56	·21

The above table shows a marked difference in the condemnations made in that part of the district where the three whole-time Meat Inspectors are employed, compared with the figures for the remainder of the district where a very imperfect system of meat inspection is carried out.

In addition to the whole carcasses which were condemned for disease in the Meat Inspection Area, as set out in the above table, the following parts of carcasses were also condemned as unfit for food :—63 bullocks' heads, 62 cow heads, 147 pigs' heads, 1 calf head, and 27 cattle for emaciation.

In the other part of the district we have a record of but two pigs' heads being condemned during the year.

The building of the abattoirs for the Newcastle District was started during the year, and it is hoped by the Board to have same completed and ready for use about March, 1916.



## PROMOTION OF EFFICIENCY OF PUBLIC HEALTH WORK IN THE HUNTER RIVER COMBINED DISTRICT.

At the present time there are several unsatisfactory features in connection with Public Health Work and efficiency in this district, which have a very prejudicial effect on the amount and character work done.

1. The office is a room about 27 feet by 10 feet, divided into two by a partition about 7 feet high, and this office has to be used for all purposes, including quarantine detention, and several cases of smallpox have been detained in it some hours before being sent to the Isolation Hospital.

The Medical Officer of Health has no privacy of any kind, which is very often required.

There should be at least one room more. Then the present part of the room now occupied by the Medical Officer of Health could be used as the office for Sanitary Inspector Godfrey, and the other part could be used by the various travelling inspectors, nurse inspectors, slaughtering inspectors, &c.

*Staff.*—This is quite inadequate for a district of this size and population.

As the Medical Officer of Health and Sanitary Inspector Godfrey have too much to do in various ways, the inspections and re-inspections (say for instance of noxious trades premises) cannot be made as frequently and as methodically as they should be.

The result is that things are not known in this office which should be recorded and tabulated, so that any given question may be answered to the Head Office at once without having to write to numerous Local Authorities, or go all round the district to find out.

As an example, the question of Local Authorities using "Steam jets" for the cleansing of pails, this office should have been capable of an immediate reply instead of waiting for a week for a reply from Local Authorities, as was the case in our instance.

When the Medical Officer of Health and Sanitary Inspector Godfrey are absent on field duties, the office is left without any one in it, which is far from satisfactory.

In addition to inspecting dairies in all the municipalities (eighteen), and also those in the Newcastle Police District, inspecting slaughter-houses and noxious traders' premises, assisting in the laboratory, attending to complaints, and doing general office work, he is also an Inspector under the Pure Food Act, but as regards this Act he can do very little, and recent work done by an officer from Sydney has shown that very rigorous supervision is required to be maintained throughout the district, especially as regards places where food-stuffs are stored or manufactured for sale.

The smallest staff required by this office for general efficiency, in addition to the Medical Officer of Health, Sanitary Inspector Godfrey is a Food Inspector for constant work under the Pure Food Act, and a clerk, if possible with some sanitary training, so as to act as laboratory assistant.

The efficiency and work of the ~~inspecting~~ district nurses has been prejudicially affected for reasons already stated.

To remedy this the following is required :—

1. All municipalities not having names to their streets, such as is the case at Pittown (Wallsend Municipality), should be requested to give names to their streets and number the houses.
2. Municipalities having named streets and no numbers should be requested to number the houses.
3. District Registrars should be instructed to obtain the accurate address of the persons who come to them to register.

*Notification of infectious diseases.*—Medical practitioners and Local Authorities should be periodically reminded of their duties and responsibilities under the Public Health Act, Part III, section 29.

*Disinfection.*—This should be more satisfactorily carried out, and the householder eliminated as a disinfector.

The uninstructed cannot satisfactorily carry out what is a scientific operation, which even many sanitary inspectors do not perform too satisfactorily.

The typhoid fever investigation form should have certain additions and alterations to increase its value. I would suggest the following :—

1. A question should be added as to whether the premises and contents were disinfected, if so, by whom.
2. What method of disinfection had been carried out?
3. The question how long before the illness began had the patient lived on the premises is often filled in "All his life," this particular query should be expanded so as to give the further information :—
  - (a) How long and how often has the patient been absent from these premises lately?
  - (b) Where was the patient during these periods, and with whom was he or she brought in contact?
  - (c) Have any visitors, friends, or others been on the said premises, and if so, have any been ill, as for example, "Had any of them just come out of a hospital after an attack of enteric fever"?

*Paritosis.*—Should be made notifiable in the district—at least in the city of Newcastle—to facilitate the work of the Tuberculosis Dispensary, when it is established.

*Vita.*



*Vital Statistics.*—The collection of vital statistics during the year 1914 has been an impossibility, as many of the District Registrars declined to send information. Forms to be filled in monthly have now been sent them, but if they continue to maintain the same attitude, they should be notified of their duties under Public Health Act, Part II, section 21, paragraph 2.

There is another very awkward factor also in connection with this matter, namely, that the "Newcastle District" of the Registrar-General, of which a quarterly report is received, does not coincide with the Hunter River Combined District, as it only refers to twelve of the municipalities (those immediately around Newcastle), and none of the shires, consequently no information is received in regard to the following:—Greta, Morpeth, Maitland (East and West), Raymond Terrace, Singleton, and the Shires of Bolwarra, Cessnock, Lake Macquarie, Port Stephens, and Tarro.

While the general part of the report covers only the Newcastle District, which, as before stated, is only a part of the Hunter River Combined District, the reports of cases of infectious diseases would seem to be derived from a larger territory than the Hunter River Combined District, as they exceed, according to the report for the quarter ending 31st December, 1914, the returns made from this office for the whole of the Hunter River Combined District in typhoid fever, diphtheria, and scarlet fever.

Could not the matter be simplified a little by the Registrar-General extending the Newcastle District so as to include the six extra municipalities and five shires, and instead of calling his return "Newcastle District," call it "Hunter River Combined District," when the quarterly report would be of much greater value to the Medical Officer of Health, Hunter River Combined District branch of the Health Department?

*Local Authorities.*—Table H shows that local authorities are not as energetic as desirable (which is putting it very moderately), in the discharge of their duties as regards health matters. There is little doubt that the tendency of these authorities, as in nearly all others I have come across in my experience of Public Health work, is to leave most things to the Public Health Department.

There are many reasons why this should be the case, and all these reasons show that the whole Public Health Administration should be in the hands of the State Public Health Department.

Much greater promptness should be shown in replying to inquiries from the Health Department than is usually the case. In many instances, after waiting perhaps a week for a reply to a simple question, a reminder has to be given, and sometimes an interview is necessary.

*Dairies.*—There is also a very important matter which seems to me should be taken into consideration. At the present time there is no standard for an inspector to adhere to as regards the construction of milking-bails and milk-rooms, consequently each inspector may have a different idea as regards what is necessary. Would it not be better for the Department to issue a plan and specification of a milking-bail and milk-room, so that a uniform plan of action could be carried out. In the matter of existing premises perhaps arrangements might be made whereby a kind of Deferred Payment system could be arranged for between the proprietor and the Department, and the amount loaned (with interest, of course).

*Hospitals.*—Experience gained in connection with hospitals both here and as Medical Inspector for North Queensland (where there was a Health Territory of over 200,000 square miles) leads me to the conclusion that the greatest efficiency is gained, and the most thorough efficiency maintained where the staff are not recruited locally, but are appointed from places not in the district.

The reasons for this are very much the same as those for the Health Department having the direct authority and supervision in all health matters.

I have, &c.,

J. BOOTH-CLARKSON, D.P.H. (Camb.), &c.,  
Acting M.O.H., H.R.C.S. District.

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PART III.

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Outbreak of Mild Smallpox in New South Wales, 1913--14.

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## PART III.

OUTBREAK OF MILD SMALLPOX IN NEW SOUTH WALES,  
1913-14.

By W. G. ARMSTRONG, M.B., Ch.M. (Syd.), D.P.H. (Camb.), Senior Medical Officer  
of Health for New South Wales.

SMALLPOX continued to occur in New South Wales during the year 1914, and 628 cases were recorded, the majority of which were in the Metropolitan District. The type of the disease continued unchanged from that observed in 1913, and was extremely mild. One death only was recorded, that of a child 23 days old whose mother (not affected by smallpox) had previously died in childbirth. Two other persons died while suffering from smallpox. One, a man of 75, was attacked by smallpox while an inmate of the Hospice for the Dying. He was suffering from cancer of the stomach. He was removed to the Quarantine Station at North Head, where he died some days later. The other case was that of a woman, aged 32, who contracted smallpox while suffering from advanced Bright's disease, from which she died. Neither of the last two mentioned deaths can be attributed to smallpox, though in both cases smallpox was set down on the death certificate as a secondary or contributing cause.

The machinery and methods of dealing with the disease which were in existence at the close of the year 1913 continued in force throughout 1914. Patients from the neighbourhood of Sydney were removed by motor ambulance to Woolloomooloo Bay, and thence by steam launch to the Quarantine Station at North Head, where they were detained under the care of the Federal Quarantine Staff until they were judged to be no longer infectious. In country districts persons suffering from smallpox were treated generally in the isolation wards of the local public hospitals. This arrangement proved quite satisfactory on the whole. In a very few instances the governing bodies of such hospitals protested against being called upon to open their institutions for the reception of smallpox cases, but such protests were not permitted to prevail. It was pointed out that patients suffering from smallpox had as much right to treatment in the local hospital as those suffering from the more common infectious diseases, and experience had shown that the debased form of smallpox which had invaded the State was characterised by a low degree of infectivity, altogether different from that accompanying the more virulent type of the disorder. It was therefore judged that this type of smallpox could be treated with safety under conditions of isolation no more stringent than those necessary for such infectious diseases as scarlet fever or diphtheria. Moreover, it was held that the payment of the Government subsidy which all country public hospitals receive, implied a right on behalf of the State to demand from the hospitals special assistance towards the stamping out of epidemic diseases in the districts served by them.

An exception to the above statement was the group of districts surrounding Newcastle. This district is a populous one surrounding a busy seaport, and it was thought advisable to construct a temporary isolation hospital for smallpox patients in the municipality of Stockton, which is a small suburb of Newcastle lying on the northern shore of the Hunter River. To this hospital all persons were removed who were found suffering from smallpox in the district surrounding Newcastle, and there were treated under the care of Dr. A. Grieves, of Stockton. The hospital was under the general control of the Medical Officer of Health for the Hunter River Combined Sanitary District (Dr. Robert Dick), and later in the year, during the absence of Dr. Dick on long service leave, under the control of his *locum tenens*, Dr. Booth-Clarkson.

The public demand for vaccination declined very greatly during 1914. This was probably in part due to the public appreciation of the extreme mildness of the type of smallpox which prevailed, and in part no doubt to the very severe reactions which certainly followed vaccination with one particular strain of lymph which was used in the early part of the epidemic in 1913, a circumstance which has already been referred to in the Annual Report for that year. The recorded number of public vaccinations, exclusive of vaccinations by private practitioners, during 1914, was only 6,628. The vaccine used by the Department was obtained from the Hastings Vaccine Station, Hawkes Bay, New Zealand, and it yielded uniformly good results.

Well defined circumscribed and more or less extensive outbreaks occurred during the year in six localities in the country districts of New South Wales. In not all of these could the origin of the outbreak be accurately traced even after all the ascertainable facts had been carefully collated, but in several instances the whole of the evidence was complete. In these latter instances (and probably the statement is true of those outbreaks also in which links in the chain of evidence are missing) the sequence of events was identical. Infection was introduced into the locality by a new arrival from Sydney who had been infected some days before leaving the metropolis, but in whom the characteristic illness and rash had not developed until he had reached his new domicile. Wilfulness or ignorance on the part of the patient led to concealment of his attack, and the first intimation of the introduction of infection which reached the medical practitioners of the district was the occurrence of a crop of cases among those persons who had been most in contact with the newcomer.

Sometimes



Sometimes when the early cases were unusually mild, even for this mild type of smallpox, a second crop of cases had occurred before a doctor was called in, and the radius of the infection was thereby greatly increased. Under these circumstances, and in view of the mildness of the disorder, the department must be congratulated on the results of its efforts to control the spread of infection in country districts. Whenever a suspicious case was reported from a country district it was visited by a member of the departmental medical staff, who remained in the district, if such a course appeared desirable, until it appeared that control over the outbreak was established.

The most extensive of these country outbreaks was one which occurred at Yass in September and October among the workmen employed on the Yass-Coolalie railway deviation works, and affected also the ordinary residents of Yass. Forty-two persons were officially known to have been attacked in this outbreak. The Railway authorities rendered considerable assistance to this department in controlling the epidemic by establishing a temporary isolation hospital in the deviation camp and appointing a medical officer to take control thereof and to vaccinate contacts (compulsorily) and any other persons in the camp who were willing to submit to the operation.

The outbreak at Moree was in many respects typical of the manner in which smallpox invaded and spread in country districts. On 15th June a journeyman barber, H.H., who resided at St. Peters, and was employed in a hairdresser's shop in Newtown (both suburbs of Sydney), left the metropolis and went to Moree, where he had obtained employment at his trade in a local hairdressing establishment. He appeared to have had an attack of illness resembling "influenza" just before leaving Sydney. Two days after his arrival in Moree he developed a "rash" and was off work for a week, during which time he was under the treatment of a local chemist. But he saw no doctor. He returned to work on 26th June, and continued thereafter regularly to attend to his duties in the barber's shop. He occupied a furnished bedroom with two fellow tradesmen, and had his meals at a boarding-house. He had never been successfully vaccinated.

By the middle of July nine persons, all of whom either frequented the premises where H.H. was employed, or resided in the same lodging-house with him, had become ill and developed "rashes" which roused the suspicion of the medical profession in the district. This department was communicated with and detailed a medical officer to visit Moree. The cases proved to be smallpox, and were isolated in the Moree Hospital. Vaccination was enforced among contacts and was pushed generally in the town of Moree by the Government Medical Officer of the district. Before the outbreak could be stamped out eight other persons (four of whom were members of one family) had been infected.

Outbreaks more or less similar in nature and extent occurred in Helensburgh (10 cases); Quirindi (20 cases); Scarborough (10 cases); Singleton (12 cases). The measures adopted were similar in every instance, and quickly led to the suppression of the outbreaks.

TABLE

SHOWING the number of persons ascertained to be suffering from Smallpox during each week of 1914.

Cases recorded to January	3	..... Nil.	Cases recorded to July	18	..... 10		
"	"	10	..... 5	"	"	25	..... 9
"	"	17	..... Nil.	"	August	1	..... 19
"	"	24	..... 9	"	"	8	..... 31
"	"	31	..... Nil.	"	"	15	..... 14
"	February	7	..... 4	"	"	22	..... 22
"	"	14	..... 8	"	"	29	..... 10
"	"	21	..... 4	"	September	5	..... 12
"	"	28	..... 1	"	"	12	..... 14
"	March	7	..... 13	"	"	19	..... 19
"	"	14	..... 2	"	"	26	..... 20
"	"	21	..... 1	"	October	3	..... 10
"	"	28	..... 9	"	"	10	..... 40
"	April	4	..... 5	"	"	17	..... 13
"	"	11	..... 4	"	"	24	..... 22
"	"	18	..... 11	"	"	31	..... 36
"	"	25	..... 3	"	November	7	..... 15
"	May	2	..... 5	"	"	14	..... 10
"	"	9	..... 11	"	"	21	..... 9
"	"	16	..... 30	"	"	28	..... 12
"	"	23	..... 17	"	December	5	..... 5
"	"	30	..... 19	"	"	12	..... 3
"	June	6	..... 12	"	"	19	..... 3
"	"	13	..... 10	"	"	26	..... 2
"	"	20	..... 32	"	"	31	..... 3
"	"	27	..... 9				
"	July	4	..... 17		Total	.....	628
"	"	11	..... 24				

TABLE showing number of cases of Smallpox occurring in the Metropolitan District during 1914.

Municipalities—		Municipalities—continued—	
City of Sydney :		Fairfield	1
Central City	54	Glebe	14
Camperdown	2	Granville	2
Centennial Park	1	Guildford	1
Chippendale	5	Hurstville	4
Darlinghurst	13	Leichhardt	10
Moore Park	2	Lidcombe	10
Pymont	8	Liverpool	4
Surry Hills	15	Marrickville	16
Ultimo	4	Mascot	3
Woolloomooloo	2	Newtown	62
	—106	North Sydney	6
Alexandria	7	Paddington	6
Annandale	7	Parramatta	2
Ashfield	3	Petersham	5
Auburn	1	Randwick	15
Balmain	10	Redfern	27
Bankstown	4	Rockdale	2
Bexley	1	Strathfield	2
Botany	3	St. Peters	42
Canterbury	5	Waterloo	5
Concord	1	Waverley	7
Darlington	2	Willoughby	1
Drummoyne	5	Woollahra	5
Enfield	1		
Epping	1		445
Erskineville	36		

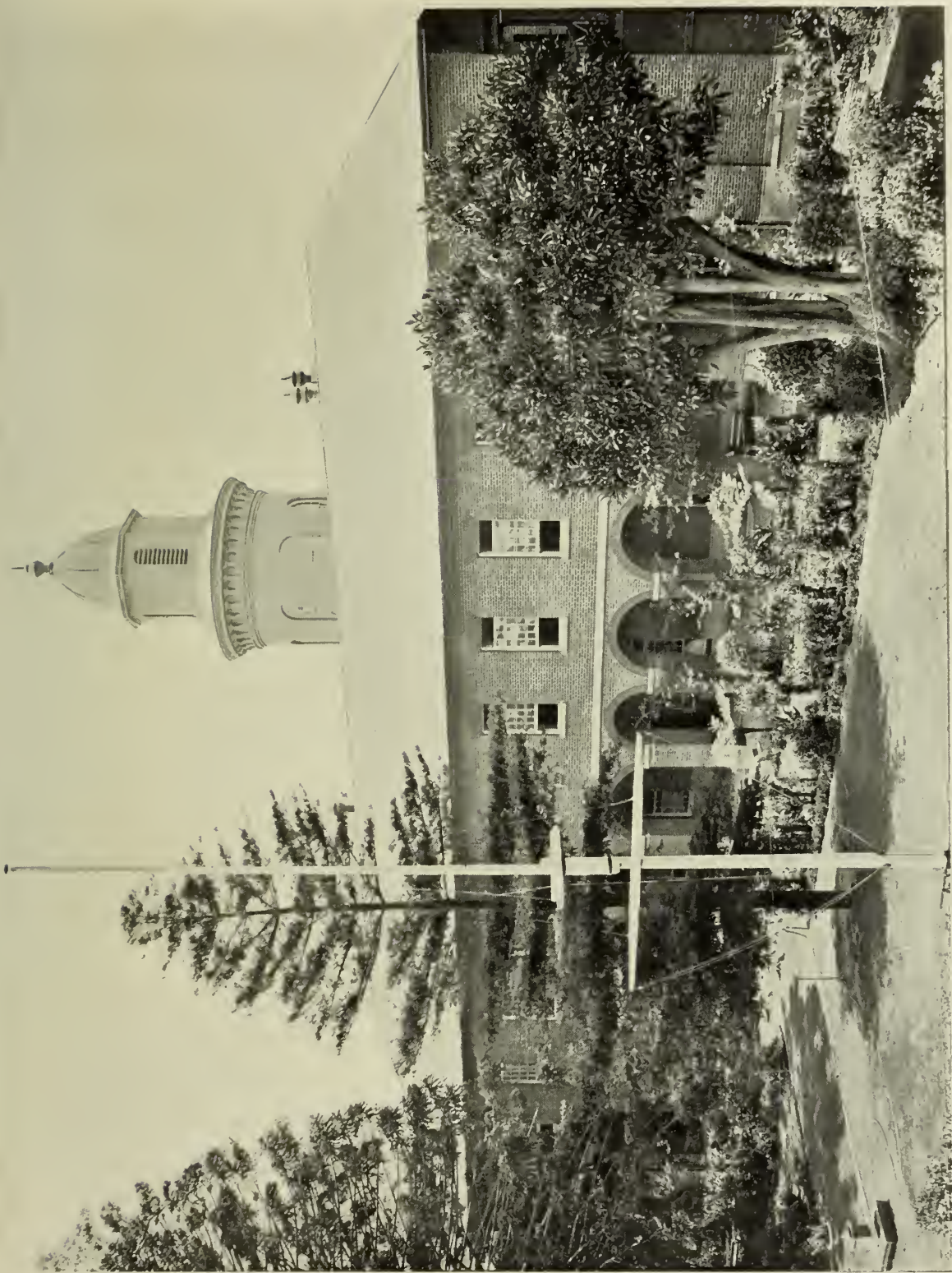
TABLE showing the cases of Smallpox occurring in Country Districts.

Armidale	...	...	3	Kyogle	...	...	1	Wickham	...	...	1
Blacktown	...	...	1	Lilyvale	...	...	1	Penrith	...	...	2
Bogan Gate	...	...	1	Moree	...	...	15	Quirindi	...	...	20
Bowning	...	...	1	Moree (Pallamallawa)	...	...	2	Rooty Hill	...	...	1
Breeza	...	...	1	Muswellbrook	...	...	2	Scarborough	...	...	10
Burrowa	...	...	1	Newcastle	...	...	15	Singleton	...	...	12
Campbelltown	...	...	3	Adamstown	...	...	2	Walgett	...	...	1
Coonamble	...	...	1	Hamilton	...	...	1	Yass	...	...	20
Coopernook	...	...	5	Lambton	...	...	3	Coolalie	...	...	17
Coraki	...	...	2	New Lambton	...	...	2	Mundoon	...	...	3
Cronulla	...	...	7	Plattsburg	...	...	1	Yass River	...	...	5
Glen Innes	...	...	2	Stockton	...	...	4				
Helensburgh	...	...	10	Wallsend	...	...	2				183
Howlong	...	...	1	West Wallsend	...	...	1				

TABLE showing number of attacks, under Sexes and Age-groups.

Age-group.	—1		—5		—10		—20		—30		—40		—50		—60		Over 60	Total.		
Sex.	M	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	F	
Attacks..	9	5	24	26	17	23	73	38	145	65	90	21	32	12	21	5	15	7	426	202





**Liverpool State Hospital and Asylum.**  
Front View of Main Buildings and Grounds.



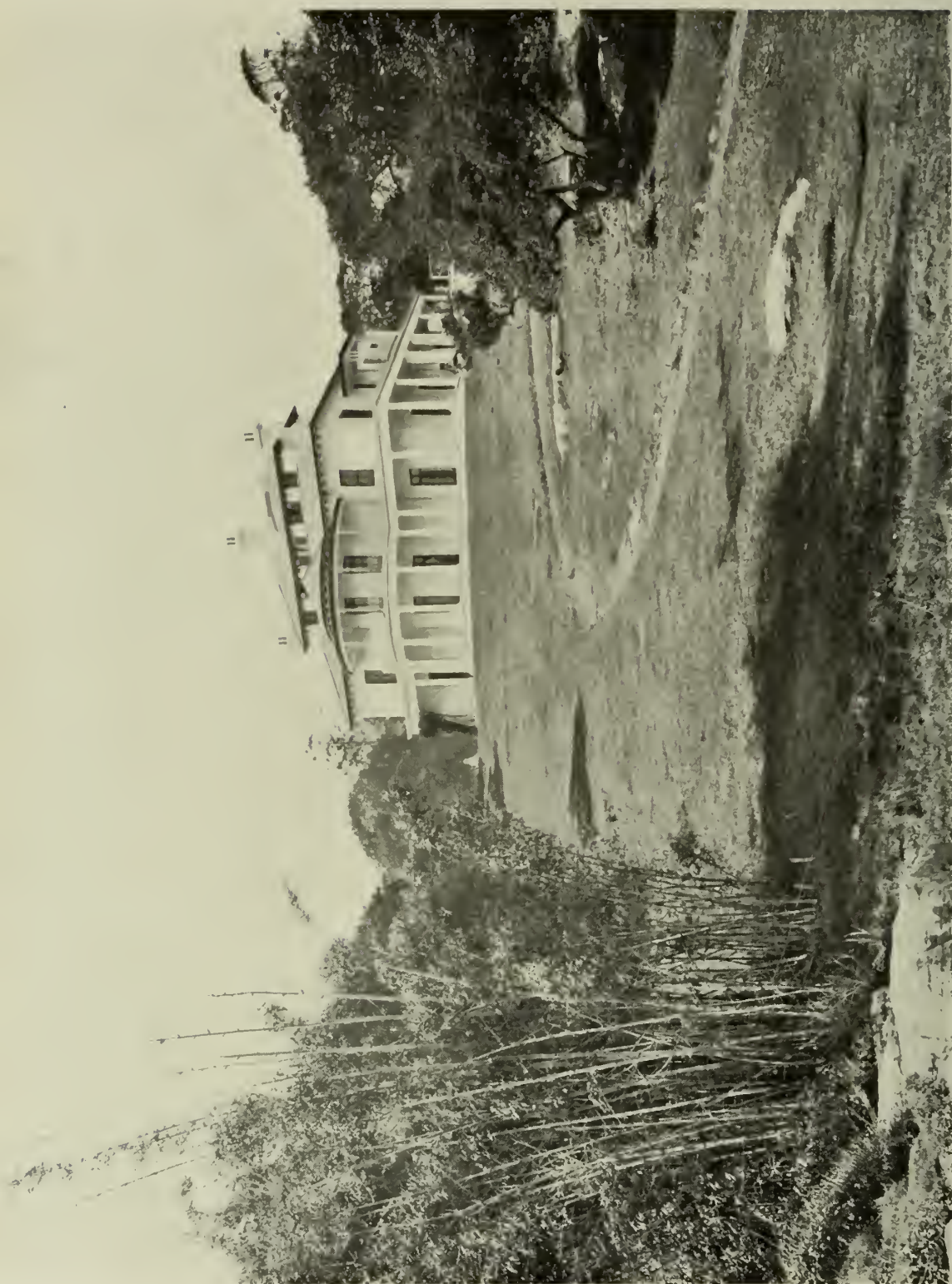


Lady Edeline Hospital for Babies, Vauluse.  
East Front.



Newington State Hospital and Asylum.  
Hospital Building.

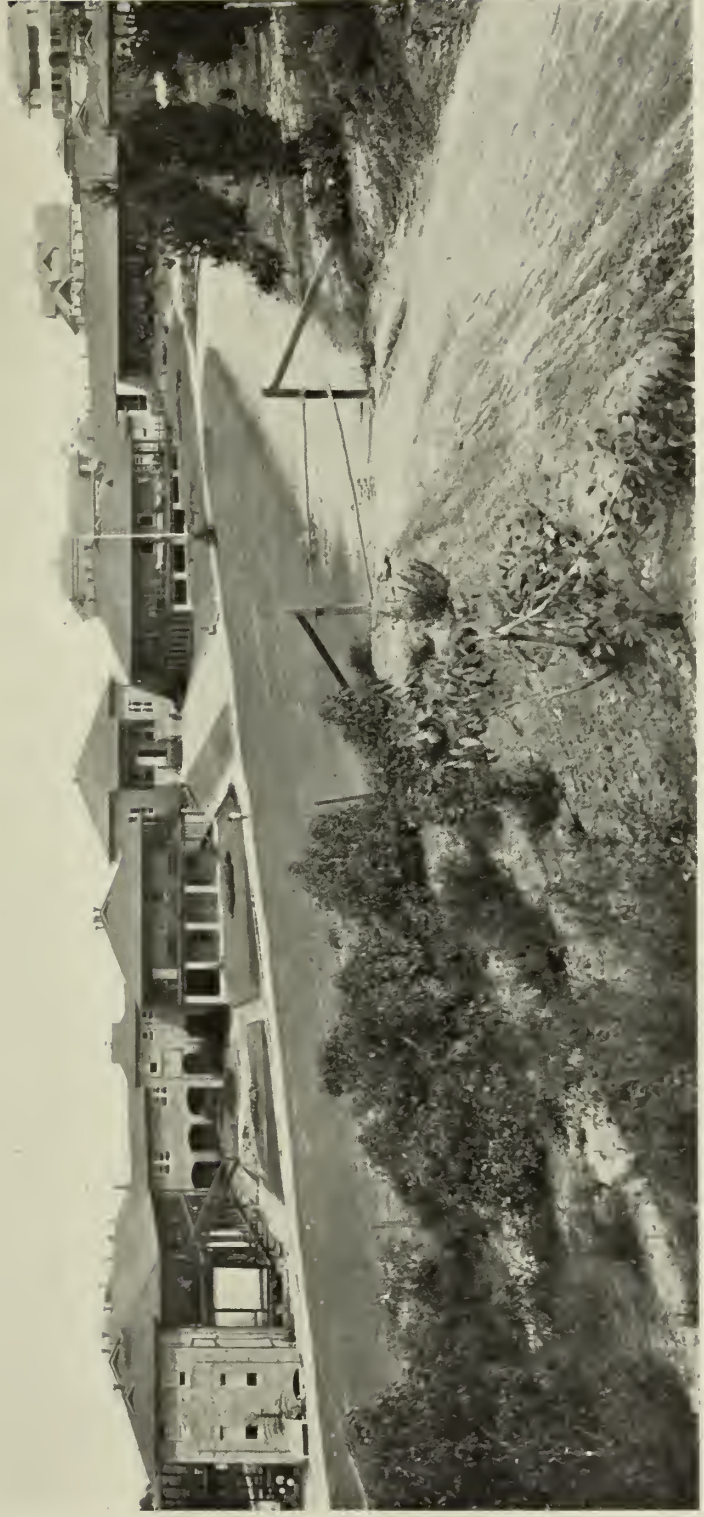




Strickland Convalescent Hospital for Women, "Carrara," Rose Bay.

Hospital from Western Front.



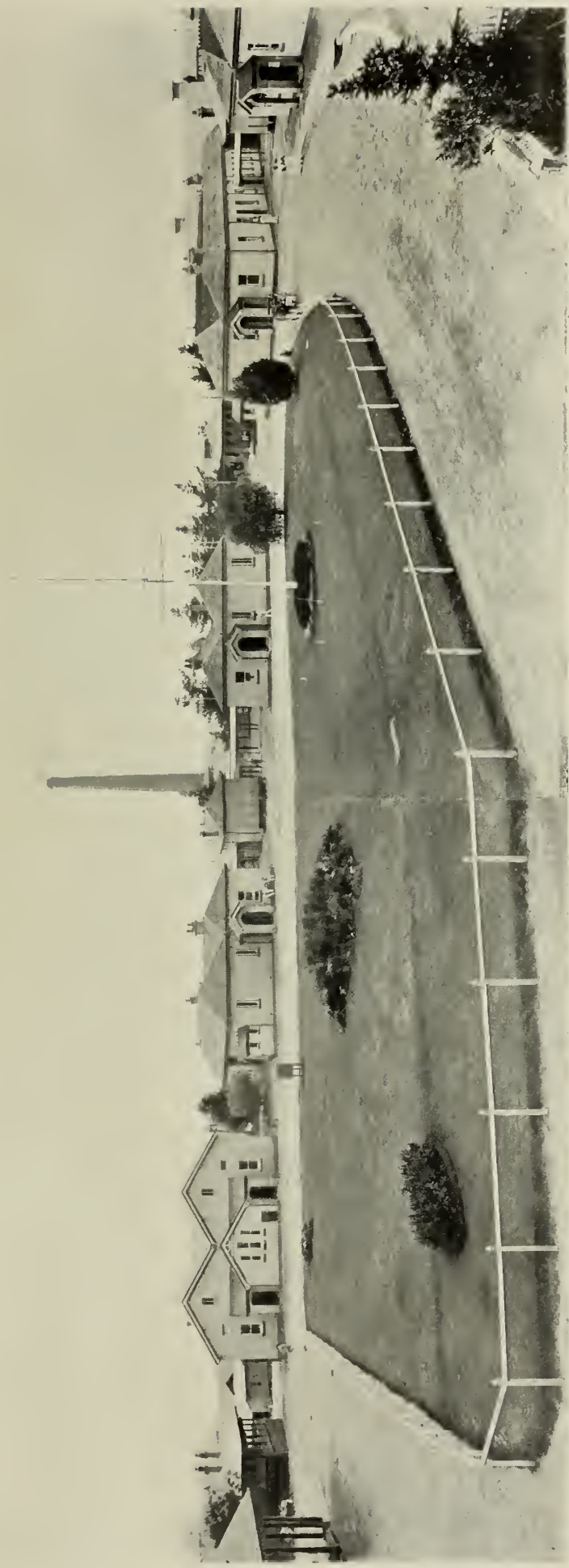


General View of Waterfall Sanatorium.



**Convalescent Hospital for Men, "Denistone House," Ryde.**  
Hospital from Entrance Gates.





Panorama of Rookwood State Hospital and Asylum.



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 PART IV.
 

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 Report upon the State Hospitals and Asylums under the control  
 of the Director-General of Public Health.
 

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## PART IV.

REPORT upon the State Hospitals under the control  
of the Director-General of Public Health.

## I.—THE COAST HOSPITAL, LITTLE BAY, SYDNEY.

REPORT FOR THE YEAR 1914.

The Acting Medical Superintendent to The Director-General of  
Public Health.

Sir,

The Coast Hospital, Little Bay,  
Sydney, 1 June, 1915.

I have the honor to submit the following Report on the working of the Coast Hospital during the year 1914.

*Staff.*

Honorary Physicians.—ALFRED WALTER CAMPBELL, M.B., M.S., M.D. (Edin.);  
JAMES MACDONALD GILL, M.D. (Lond.), L.R.C.P. (Lond.), M.R.C.S. (Eng.).

Honorary Surgeons.—CHARLES PERCY BARLEE CLUBBE, L.R.C.P. (Lond.),  
M.R.C.S.E. (Eng.); SIR HERBERT LETHINGTON MAITLAND, M.B., M.S.;  
GEORGE HENRY ABBOTT, M.B., M.S.; HON. GEORGE BRADY NASH,  
M.D., M.S. (Edin.), M.R.C.S. (Eng.), M.L.C.

Honorary Gynæcologists.—RALPH WORRALL, M.D., M.S. (Ire.); HUGH  
CORBETT TAYLOR YOUNG, M.B., M.D. (Glas.).

Honorary Ophthalmist.—CHARLES GORDON McLEOD, M.D., M.B. (Edin.).

*Resident Medical Staff.*

Medical Superintendent.—REGINALD JEFFREY MILLARD, M.B., Ch.M., D.P.H.  
(on leave with Australian Expeditionary Forces).

Assistant Medical Officer.—DONALD WALLACE, M.A., M.B., Ch.M.

Acting Medical Superintendents.—THOMAS MAYNARD FURBER, M.B., Ch.M.;  
JAMES A. JAMES, M.B., Ch.M.; THOMAS J. FRIZELL, M.B., Ch.M.

Senior Assistant Superintendent.—R. Goldrick.

Matron.—A. Watson.

Dispenser.—Miss M. W. Fitz-Gibbon.

Clerk and Storekeeper.—W. Dwyer.

2. *Statistics.*—Detailed tables of statistics will be found in the Appendix, but I may summarise here the more important of these.

I.—The following Table is a comparative general statement for 1914 and the previous year :—

	1913.	1914.
Remaining in Hospital on 31st December.....	303	408
Admitted during the year .....	3,702	4,033
Total cases under treatment during the year .....	4,041	4,336
Discharges, including deaths .....	3,738	3,928
Deaths.....	192	149
Death-rate per cent. of total discharges.....	5.13	3.81
Average daily number of occupied beds .....	335.51	373.11
Average stay of patients (in days) .....	31.83	32.35



For the year, the number of admissions was 331 more than in 1913; and the average daily number of occupied beds was 373·11, as against 335·51 in 1913. The average stay of patients increased from 31·83 days to 32·35 days.

II. *Infectious Diseases*.—The following Table summarises the work of the year in regard to these, and affords a comparison with 1913. In this Table the “cases” are cases treated until discharge or death, and the fatality is reckoned on the total cases treated. Cases remaining in hospital on 31st December, 1914, are not included in these figures for the year.

	1913.			1914.		
	Cases.	Deaths.	Fatality.	Cases.	Deaths.	Fatality.
Typhoid Fever .....	77	10	12·98	73	12	16·43
Scarlet Fever .....	287	7	2·43	628	7	1·11
Diphtheria .....	994	28	2·81	977	10	1·02
Measles .....	93	...	...	82	1	1·21
Whooping-cough .....	64	14	21·8	36	4	11·11
Erysipelas .....	48	5	10·41	34	1	2·94
Mumps .....	22	...	...	20	...	...
Variola .....	4	...	...	6	...	...

*Typhoid Fever*.—The number of cases under treatment was less than in 1913; the fatality was higher.

*Scarlet Fever*.—Was more prevalent than in 1913—1,801 cases being notified in the whole Metropolitan area during 1914, as against 555 during 1913, and the cases treated at the Coast Hospital showed a corresponding increase. There were 7 deaths, 3 of which occurred within seven days after admission.

*Diphtheria*.—In the Metropolis the cases notified amounted to 2,244 in 1914, as against 2,045 in 1913, and the cases treated at the Coast Hospital were 1,057 as against 994. The percentage of notified cases which came to this hospital for treatment was—in 1913, 48·6 per cent.; and in 1914, 47·10 per cent. Of the 10 fatal cases 6 died within seven days of admission. Intubation was performed on 4 patients, and tracheotomy on 3.

Antitoxin was administered in the hospital to 977 cases. In view of the prevailing diversity of opinion as to the appropriate dosage of Antitoxin, it may be of interest to record briefly the amounts used here, which were as follows :—

Antitoxin.	Cases.	Percentage of Total Cases.	Antitoxin.	Cases.	Percentage of Total Cases.
2,000 units.....	250	25·6	32,000 units.....	3	·3
4,000 „ .....	144	14·7	34,000 „ .....	1	·1
6,000 „ .....	113	11·6	36,000 „ .....	1	·1
8,000 „ .....	102	10·4	38,000 „ .....	.....	.....
10,000 „ .....	124	12·7	40,000 „ .....	4	·41
12,000 „ .....	33	3·4	44,000 „ .....	1	·1
14,000 „ .....	12	1·2	50,000 „ .....	2	·21
16,000 „ .....	41	4·2	60,000 „ .....	.....	.....
18,000 „ .....	7	·7	70,000 „ .....	.....	.....
20,000 „ .....	88	8·8	80,000 „ .....	1	·1
22,000 „ .....	.....	.....	90,000 „ .....	.....	.....
24,000 „ .....	10	1·02	120,000 „ .....	1	·1
26,000 „ .....	3	·3	130,000 „ .....	.....	.....
28,000 „ .....	7	·72	140,000 „ .....	.....	.....
30,000 „ .....	29	3·			

Altogether 1,913 cases of scarlet fever, diphtheria, measles, whooping-cough, and mumps were treated in the Infectious Division, as against 1,460 cases in 1913. In the Appendix will be found further details concerning these cases, viz. :—

Table VI.—Number of cases of diphtheria, scarlet fever, and typhoid fever notified within the Metropolis, and the percentage of these cases admitted to the Coast Hospital in each of the years 1898–1914 inclusive.

Table IV.—Typhoid fever. Age and sex distribution.

Table V.—Diphtheria. Age and sex distribution.

Table VIII.—Fortnightly admissions of cases of typhoid fever, scarlet fever, diphtheria, and measles.

Table VII.—Duration of stay in hospital of cases of typhoid fever, scarlet fever, and diphtheria.

Table XIV.—Cases of infectious disease admitted, and deaths from the several diseases, for each year since 1884.

III. *The Expenditure for the Coast Hospital is shown on p. 121*—The total cost for the year 1913 was £31,508 Os. 4d., and for the year 1914 £27,749 6s. 7d.—a reduction of £3,758 13s. 9d.

The

The average daily number of occupied beds in 1913 was 335.51. In 1914 the number rose to 373.11—an increase of about 38.

Exclusive of expenditure in connection with the ambulance service, a branch of work transferred from the Coast Hospital to the Public Health Department Hospital Admission Depôt, during 1914—the average cost per occupied bed in 1913 was £87 6s. 6½d. per annum. As evidenced by the decrease in expenditure and the increase in the number of admissions, the cost per occupied bed in the year 1914 shows a very satisfactory reduction, viz., a decrease from £87 6s. 6½d. in 1913 to £74 7s. 5d. in 1914.

Table XI gives a detailed statement of the working expenses in 1914.

4. *Nursing*.—Miss Watson continued as Matron. Instruction by lectures and demonstrations was, as usual, given to the Nurses by the Medical Staff and Matron; and in invalid cookery by a specially engaged teacher (Miss K. Harriott), as in former years. Examinations were held in accordance with regulations, with the following results :—

First-year examination	...	...	...	...	...	26
Second-year	„	...	...	...	...	21
Third-year	„	...	...	...	...	9
Fourth-year	„	...	...	...	...	5

During the year 15 certificated nurses left the hospital to take up private nursing.

Sick leave was granted to 55 nurses, amounting in the aggregate to 2,158 days. Of these nurses, 2 had typhoid fever, 270 days; 16 had diphtheria, 578 days; 2 had scarlet fever, 77 days; 2 had measles, 19 days. All recovered satisfactorily.

5. *Laboratory*.—The following Table summarises the work done in the hospital laboratory month by month. In all, 8,378 diphtheria cultures were examined. The practice was continued of accepting no diphtheria culture as negative unless found so after forty-eight hours' incubation.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Diphtheria cultures :—													
1. Examined after 12-24 hours' incubation .....	615	693	793	860	994	814	768	643	520	509	520	649	8,378
2. After further 24 hours' incubation .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Negative for K.L. at first examination, and re-examined .....	340	365	484	514	605	538	456	373	338	303	337	450	5,103
Of these, found positive at second examination .....	62	47	61	116	154	123	74	37	28	40	26	81	849
Percentage.....	18.2	12.8	12.0	22.0	25.4	22.8	16.2	9.9	8.2	13.0	7.7	18.0	15.5
Sputum for Tubercle .....	6	10	3	6	3	10	10	10	7	3	2	7	77
Leprosy smears .....	...	28	17	...	2	9	...	...	...	...	1	1	58
Gonorrhoeal smears .....	18	11	3	12	6	4	18	10	13	20	9	6	130
Widal tests.....	...	...	...	...	...	...	...	...	...	...	...	...	...
Leucocyte counts .....	...	...	...	...	2	1	...	1	...	1	...	...	5
Blood culture.....	...	...	...	...	...	...	5	...	...	1	...	3	9
Vaccines prepared.....	...	...	...	...	...	...	...	...	...	...	...	...	...
Blood examinations .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Urine for casts, &c. ....	7	13	2	6	14	15	7	11	8	6	6	7	102
Urine for Tubercle bacilli .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Smears for B. Pestis .....	...	...	...	...	...	...	...	1	...	...	...	...	1
Cultures for B. Pestis .....	...	...	...	...	3	1	...	...	...	...	...	...	4
Sundry examinations .....	7	...	2	...	...	7	2	1	3	...	...	1	23
Smears for Spirechaetes .....	...	...	...	...	...	9	1	2	...	...	...	2	14

6. *Ambulance Service*.—The horse ambulance service stationed at the Coast Hospital was abolished during the year. Patients are now removed by motor ambulances stationed at the Health Department Depôt, at Woolloomooloo.

7. *Additions, Alterations, &c.*—The principal works carried out during the year 1914 were the following :—

- The installation of a new steam mangle at the Laundry.
- The strengthening of the embankment which carries the sewer and the water mains over the low-level in the general division, and the improvement of the walks and grounds in the vicinity.
- The replacing of the calico walls of Ward 17 with fibro-cement, and improvements in the ventilation.
- The painting and renovation of the wards and nurses' quarters in the infectious division, together with the improvement of the lawns and gardens.
- The rearrangement and general improvement of the fire appliances of the hospital.
- The painting and renovation of the cottages occupied by resident officers.
- The erection of cow-bails to enable infants to be supplied with fresh milk from the small herd purchased for this purpose.

I have, &c.,

D. WALLACE,  
Acting Medical Superintendent.

APPENDIX



## APPENDIX.

TABLE I.—General Statement of the working of the Hospital from 1st January to 31st December, 1914.

	Males.	Females.	Total.
Number of beds available in the General Division on 31st December, 1914 .....	114	53	167
"    "    Infectious Division .....	.....	.....	166
"    "    Nurses' Sick Room .....	.....	4	4
Total accommodation .....	.....	.....	337
Number of inmates remaining in hospital on 31st December, 1913 ...	182	121	303
"    admitted during the year 1914 .....	2,303	1,730	4,033
Total treated .....	2,485	1,851	4,336
Discharged—Cured .....	1,505	1,487	2,992
"    Relieved .....	583	132	715
"    Unrelieved .....	53	19	72
Died .....	86	63	149
Total number discharged, or who died...	2,227	1,701	3,928
Remaining in hospital on 31st December, 1914 .....	246	162	408

Average daily number resident .....	373.11
Average residence of discharged patients in days .....	32.35
Rate of mortality on total number who were discharged or who died .....	3.81
Total cost of maintenance and treatment of indoor patients .....	£27,749 6s. 7d.
Average cost of patients per annum .....	£74 7s. 5d.

	Males.	Females.	Total.	Total Visits.
Outdoor relief—				
Total number of individuals who received relief ...	410	441	851	1,650
Total cost of Outdoor Relief .....	£45 0s. 11d.			

## Hospital Staff on 31st December, 1914.

Medical and Administrative.	Number.	Nursing.	Number.	General.	Number.
Medical Superintendent .....	1	Sub-Matron .....	1	Artisans .....	10
Assistant Medical Officer .....	4	Sisters .....	9	Attendants, Out-door .....	3
Senior Assistant Superintendent .....	1	Housekeeper .....	1	"    .....	12
Matron .....	1	Probationers .....	72	Telephone attendant .....	1
Dispenser .....	1	Pupil Nurses .....	14	Male Cooks .....	3
Clerks .....	3	Wardsmen .....	6	Female Cooks .....	3
Total .....	11		103	"    Servants .....	14
				Laundresses .....	7
				Needlewoman .....	1
					54
				Total Staff .....	168

TABLE II.—Return showing the number of Wards, together with the cubic space and number of beds in each Ward, in the Coast Hospital for the year 1914.

Ward.	Cubic Space.	No. of Beds.	Cubic space per Bed.	Ward.	Cubic Space.	No. of Beds.	Cubic space per Bed.
1A .....	21,600	35	917	Observation Rooms (8) Ward . 13.	11,520	8	1,440
1C .....	10,500			14A .....	6,000	7	857
B .....	10,800			14B .....	12,000	15	800
2 (3 rooms) .....	10,368	12	864	14C .....	2,310	4	577
3 .....	12,000	10	1,200	Observation Rooms (2) Ward 14.	2,880	2	1,440
4 .....	12,000	10	1,200	15A .....	13,200	28	1,205
5 .....	21,960	25	878	15B .....	13,200		
6 .....	10,800	8	1,350	Isolation Rooms (4) Ward 15	7,356		
7 .....	10,800	8	1,350	Strong Rooms (4) .....	3,000	4	750
8 .....	21,960	23	954	Nurses' Sick Room .....	3,300	4	825
9 .....	12,000	10	1,200	Ward 16 .....	11,520	16	720
10 .....	12,000	10	1,200	"    17 .....	18,192	20	906
11 (2 rooms) .....	22,320	24	930				
12 (2 rooms) .....	22,320	25	892				
13 (1 room) .....	5,760	7	823				
				Total .....	222,266	337	23,024



TABLE III.—Diseases other than Infectious—Discharges and Deaths during 1914 distributed under sex and age.

Age.	0-5.		6-10.		11-15.		16-20.		21-30.		31-40.		41-50.		51-60.		61-70.		71-80.		81-90.		Total.	
Sex.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Cases treated...	59	43	35	28	37	32	98	57	502	221	239	105	167	79	156	61	98	21	21	8	6	...	1,418	655
Deaths .....	6	2	...	...	3	...	...	1	5	9	6	9	18	10	13	11	11	4	4	2	...	...	66	48

Mortality, 5.50 per cent.

TABLE IV.—Typhoid Fever—Discharges and Deaths during 1914, distributed under sex and age.

Age.	0-5.		6-10.		11-15.		16-20.		21-30.		31-40.		41-50.		51-60.		61-70.		71-80.		81-90.		Total.	
Sex.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Cases treated...	2	...	1	3	6	1	6	5	20	13	8	3	3	...	1	1	...	...	...	...	...	...	47	26
Deaths .....	...	...	...	...	...	...	1	7	1	2	1	...	...	...	...	...	...	...	...	...	...	...	9	3

Mortality, 16.43 per cent.

TABLE V.—Ages and Sexes of Diphtheria cases.

	Male.	Female.		Male.	Female.
Under 1 year .....	7	8	20-24 years .....	41	52
1 year.....	18	9	25-29 „ .....	16	25
2 years.....	36	29	30-34 „ .....	12	19
3 „ .....	42	43	35-39 „ .....	3	5
4 „ .....	37	48	40-44 „ .....	3	4
Total under 5 years ...	140	137	45-49 „ .....	.....	2
5-9 years.....	126	191	50-54 „ .....	1	1
10-14 years .....	39	78	55-59 „ .....	.....	1
15-19 „ .....	43	39	60 years and over .....	.....	.....
			Total .....	423	554

TABLE VI.—Showing Number of Cases of Diphtheria, Scarlet Fever, and Typhoid Fever notified within the Metropolis, and the percentage of these cases treated at the Coast Hospital, in each of the years 1898-1914 inclusive.

	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.
<i>Diphtheria.</i>																	
Cases notified in Metropolis.	613	285	278	439	393	690	738	695	659	659	880	1,144	2,109	1,834	2,632	2,045	2,244
Cases treated at Coast Hospital.	27	25	7	65	64	92	301	313	267	389	360	500	909	974	1,284	994	1,057
Percentage.....	4.40	8.77	2.51	14.80	16.30	13.33	40.80	45.03	40.51	59.03	40.91	43.70	43.10	53.10	48.70	48.6	47.10
<i>Scarlet Fever.</i>																	
Cases notified in Metropolis.	2,425	556	464	884	1,253	2,910	1,361	1,136	1,869	976	1,153	836	394	369	304	555	1,801
Cases treated at Coast Hospital.	350	134	116	150	313	585	371	284	503	336	420	339	150	134	108	287	715
Percentage .....	14.43	24.10	25.00	16.96	24.98	20.10	27.26	25.00	27.45	34.43	36.43	40.55	38.07	36.31	35.50	51.71	39.70
<i>Typhoid Fever.</i>																	
Cases notified in Metropolis.	824	786	983	829	610	833	665	561	485	505	678	700	812	488	535	566	644
Cases treated at Coast Hospital.	163	148	247	214	144	166	178	139	84	101	118	96	85	66	67	77	81
Percentage .....	19.78	18.83	25.12	25.81	23.60	19.93	26.77	24.77	17.32	20.00	17.40	13.71	10.46	13.52	12.50	13.78	12.58

TABLE VII.—Duration of Stay of cases of Typhoid Fever, Scarlet Fever, and Diphtheria.

Duration of Stay.	Typhoid Fever.			Scarlet Fever.			Diphtheria.		
	Cured.	Died.	Total.	Cured.	Died.	Total.	Cured.	Died.	Total.
1 week or less...	.....	2	2	1	3	4	34	5	39
1—2 weeks ...	1	4	5	9	3	12	67	3	70
2—3 " ...	2	3	5	7	1	8	140	2	142
3—4 " ...	.....	3	3	68	.....	68	199	.....	199
4—5 " ...	10	.....	10	286	.....	286	161	.....	161
5—6 " ...	15	.....	15	128	.....	128	123	.....	123
6—7 " ...	11	.....	11	73	.....	73	72	.....	72
7—8 " ...	10	.....	10	19	.....	19	51	.....	51
8—9 " ...	5	.....	5	5	.....	5	29	.....	29
9—10 " ...	2	.....	2	4	.....	4	18	.....	18
10—11 " ...	1	.....	1	6	.....	6	19	.....	19
11—12 " ...	1	.....	1	4	.....	4	16	.....	16
12—13 " ...	.....	.....	.....	3	.....	3	12	.....	12
13—14 " ...	.....	.....	.....	2	.....	2	6	.....	6
14—15 " ...	.....	.....	.....	.....	.....	.....	4	.....	4
15—16 " ...	.....	.....	.....	4	.....	4	7	.....	7
16—17 " ...	.....	.....	.....	.....	.....	.....	1	.....	1
17—18 " ...	.....	.....	.....	.....	.....	.....	.....	.....	.....
18—19 " ...	1	.....	1	1	.....	1	3	.....	3
19—20 " ...	1	.....	1	.....	.....	.....	1	.....	1
20—21 " ...	.....	.....	.....	.....	.....	.....	.....	.....	.....
21—22 " ...	1	.....	1	.....	.....	.....	.....	.....	.....
22—23 " ...	.....	.....	.....	.....	.....	.....	2	.....	2
23—24 " ...	.....	.....	.....	.....	.....	.....	.....	.....	.....
24—25 " ...	.....	.....	.....	1	.....	1	2	.....	2
	61	12	73	621	7	628	967	10	977

TABLE VIII.—Fortnightly Admissions of cases of Typhoid Fever, Scarlet Fever, Diphtheria, and Measles, 1914.

	Fortnight ending—																												Total
	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		December.						
	14	28	11	25	11	25	8	22	6	20	3	17	1	15	29	12	26	9	23	7	21	4	18	2	16	31			
Typhoid Fever ...	3	2	2	5	4	9	6	11	5	7	3	3	1	1	1	1	1	2	...	...	1	...	3	3	2	...	76		
Scarlet Fever .....	5	4	14	12	16	12	19	10	26	16	17	35	27	35	30	38	29	31	33	23	39	33	36	46	41	36	663		
Diphtheria .....	27	38	48	53	51	53	43	65	67	52	38	40	30	30	37	38	28	24	20	21	35	27	25	27	33	39	989		
Measles .....	1	...	1	1	1	8	1	...	1	2	1	2	...	1	2	...	3	2	1	3	3	2	14	13	17	4	84		

TABLE IX.—Return of the Number of Persons under Treatment, the Order of Disease for which they were treated, and the Number of Deaths in each Order during the year 1914. (Includes cases remaining in Hospital on 31st December, 1914.)

	Discharged during the year.				Remaining in on 31st December, 1914.	Total.
	Cured.	Relieved.	Un- relieved.	Died.		

CLASS 1.—GENERAL DISEASES.

Typhoid Fever .....	61	.....	.....	12	8	81
Malaria .....	1	1	.....	.....	.....	2
Smallpox .....	.....	5	1	.....	.....	6
Measles .....	81	.....	.....	1	3	85
Scarlet Fever.....	617	2	2	7	87	715
Whooping-cough .....	28	4	.....	4	.....	36
Diphtheria .....	948	17	2	10	80	1,057
Influenza .....	14	.....	.....	1	4	19
Leprosy .....	.....	1	5	.....	.....	6
Dysentery .....	.....	.....	.....	.....	.....	.....
Erysipelas .....	32	.....	1	1	3	37
Mumps and Other Epidemic Diseases .....	20	.....	.....	.....	.....	20
Purulent Infection and Septicæmia .....	9	.....	.....	1	.....	10
Anthrax .....	.....	.....	.....	1	.....	1
Tetanus .....	.....	.....	.....	2	.....	2
Beri beri.....	2	.....	.....	.....	.....	2
Trichinosis .....	.....	.....	.....	.....	.....	.....
Actinomycosis .....	.....	.....	.....	.....	.....	.....
Tuberculosis of the Lungs .....	.....	18	5	10	2	35
Tuberculosis Abdominal.....	.....	.....	.....	.....	.....	.....
Pott's Disease .....	.....	4	.....	2	.....	6
Tubercular Disease of Bone .....	.....	.....	.....	.....	2	2
Tuberculosis of other organs .....	1	.....	.....	1	14	16

TABLE IX.—Return of the Number of Persons under Treatment, &c.—*continued.*

	Discharged during the year.				Remaining in on 31st December, 1914.	Total.
	Cured.	Relieved.	Un- relieved.	Died.		

CLASS 1.—GENERAL DISEASES—*continued.*

White Swellings.....	2	9	.....	.....	.....	11
General Tuberculosis.....	.....	4	.....	.....	1	5
Rickets.....	.....	.....	.....	.....	.....	.....
Syphilis—						
Primary .....	2	63	.....	.....	4	69
Secondary .....	.....	142	1	.....	13	156
Tertiary .....	3	58	5	1	2	69
Hereditary .....	.....	1	.....	.....	.....	1
Soft Chancre .....	20	2	.....	.....	.....	22
Gonorrhœal Diseases.....	125	80	6	1	19	231
Cancer, &c., of the Mouth .....	3	1	1	1	1	7
Cancer, &c., of the Stomach and Liver.....	.....	2	2	3	.....	7
Cancer, &c., of the Peritonæum, the Intestines, and the Rectum .....	.....	.....	.....	1	1	2
Cancer, &c., of the Female Genital Organs.....	.....	1	2	.....	1	4
Cancer, &c., of the Breast .....	.....	1	.....	.....	.....	1
Cancer of Skin .....	3	.....	2	1	1	7
Cancer, &c., of other Organs .....	2	2	2	3	1	10
Tumour of Penis .....	.....	.....	.....	.....	.....	.....
Acute Rheumatism .....	23	10	.....	.....	6	39
Chronic Rheumatism and Gout .....	9	24	.....	.....	5	38
Diabetes .....	.....	1	1	4	1	7
Exophthalmic Goitre .....	.....	1	1	.....	.....	2
Leucæmia .....	.....	1	.....	2	.....	3
Anæmia, Chlorosis .....	.....	1	.....	.....	.....	1
Acute and Chronic Alcoholism .....	5	5	.....	.....	.....	10
Ptomaine Poisoning .....	.....	.....	.....	.....	.....	.....
Lead Poisoning .....	1	1	.....	.....	.....	2
Other Chronic Poisoning .....	.....	1	.....	.....	.....	1
Total, Class 1 .....	2,012	463	39	70	259	2,843

## CLASS 2.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.

Simple Meningitis .....	1	.....	.....	.....	.....	1
Locomotor Ataxia.....	.....	3	.....	.....	.....	3
Other Diseases of the Spinal Cord .....	.....	4	.....	1	1	6
Cerebral Hæmorrhage.....	2	3	.....	1	4	10
Paralysis without indicated cause .....	.....	4	.....	1	.....	5
General Paralysis of the Insane .....	.....	.....	1	.....	.....	1
Other forms of Mental Alienation .....	1	1	3	.....	.....	5
Epilepsy .....	1	1	1	.....	.....	3
Convulsions .....	.....	.....	.....	.....	.....	.....
Chorea.....	8	2	.....	.....	.....	10
Hysteria .....	.....	.....	1	.....	2	3
Neuralgia and Neuritis.....	7	4	1	.....	2	14
Other diseases of the Nervous System.....	3	4	1	.....	.....	8
Diseases of the Ear .....	.....	.....	.....	.....	.....	.....
Diseases of the Eye and Adnexa .....	4	.....	.....	.....	.....	4
Total, Class 2 .....	27	26	8	3	9	73

## CLASS 3.—DISEASES OF THE CIRCULATORY SYSTEM.

Acute Endocarditis .....	.....	2	1	1	.....	4
Organic Diseases of the Heart.....	.....	26	.....	10	3	39
Diseases of the Arteries, Atheroma, Aneurism, &c. ....	1	2	.....	4	2	9
Embolism and Thrombosis .....	.....	.....	.....	.....	1	1
Diseases of the Veins (Varices, Varicose Ulcer, Hæmorrhoids) .....	68	3	3	.....	4	78
Diseases of the Lymphatic System .....	6	3	.....	.....	1	10
Hæmorrhage .....	1	.....	.....	.....	.....	1
Total, Class 3 .....	76	36	4	15	11	142

## CLASS 4.—DISEASES OF THE RESPIRATORY SYSTEM.

Diseases of the Nasal Fossæ .....	1	.....	.....	.....	.....	1
Diseases of the Larynx.....	5	.....	.....	.....	.....	5
Diseases of the Thyroid Body.....	.....	.....	.....	.....	.....	.....
Acute Bronchitis .....	29	2	.....	.....	3	34
Chronic Bronchitis .....	7	10	.....	.....	.....	17
Broncho-Pneumonia .....	6	.....	.....	2	.....	8
Pneumonia .....	53	.....	.....	11	6	70
Pleurisy.....	7	1	.....	.....	.....	8
Asthma .....	4	3	.....	.....	1	8
Other Diseases of Respiratory System .....	2	2	.....	.....	2	6
Total, Class 4 .....	114	18	.....	13	12	157



TABLE IX.—Return of the Number of Persons under Treatment, &c.—*continued*.

	Discharged during the year.				Remaining in on 31st December, 1914.	Total
	Cured.	Relieved.	Un- relieved.	Died.		
CLASS 5.—DISEASES OF THE DIGESTIVE SYSTEM.						
Diseases of the Teeth and Gums.....	.....	1	.....	.....	.....	1
Diseases of the Mouth and its associated organs .....	4	1	.....	1	1	7
Diseases of the Pharynx .....	156	1	.....	1	4	162
Ulcer of the Stomach.....	.....	1	.....	.....	.....	1
Other Diseases of the Stomach (Cancer excluded) .....	24	4	.....	.....	1	29
Diarrhoea and Enteritis (children under two years of age only) .....	7	.....	.....	3	1	11
Diarrhoea and Enteritis (children over two years and adults).....	19	.....	.....	.....	2	21
Appendicitis .....	40	2	1	.....	3	46
Hernia, Intestinal Obstruction.....	47	4	4	.....	5	60
Other Diseases of the Intestines.....	14	4	1	.....	3	22
Diseases of the Anus and Faecal fistulae .....	7	2	.....	1	.....	10
Hydatid Tumors of the Liver.....	3	1	.....	.....	.....	4
Cirrhosis of the Liver.....	.....	4	.....	1	.....	5
Biliary Calculi.....	3	.....	.....	1	1	5
Other Diseases of the Liver.....	7	1	2	2	1	13
Simple Peritonitis (non-puerperal) .....	.....	.....	.....	.....	.....	.....
Hydatid of Bone .....	.....	.....	.....	.....	.....	.....
Other Diseases of Digestive System .....	2	1	.....	.....	1	4
Total, Class 5 .....	333	27	8	10	23	401
CLASS 6.—DISEASES OF THE GENITO-URINARY SYSTEM AND ADNEXA.						
Acute Nephritis .....	.....	1	.....	2	1	4
Bright's Disease.....	.....	8	.....	15	2	25
Chyluria.....	1	.....	1	.....	.....	2
Other Diseases of the Kidneys and their Adnexa .....	12	3	.....	.....	.....	15
Calculi of the Urinary Passages .....	2	1	.....	2	.....	5
Diseases of the Bladder.....	8	4	.....	.....	2	14
Other Diseases of the Urethra, Urinary Abscess, &c. ....	8	4	.....	.....	2	14
Diseases of the Prostate .....	2	1	2	2	.....	7
Non-venereal Diseases of the Male Genital Organs .....	14	.....	2	.....	.....	16
Metritis .....	.....	.....	.....	.....	.....	.....
Uterine Hæmorrhage (non-puerperal) .....	22	.....	.....	.....	.....	22
Uterine Tumor (non-cancerous) .....	.....	.....	.....	.....	.....	.....
Other Diseases of the Uterus .....	.....	4	2	.....	.....	6
Cysts and other Ovarian Tumors .....	1	.....	.....	1	1	3
Other Diseases of the Female Genital Organs.....	24	12	2	.....	4	42
Non puerperal Diseases of the Breast (Cancer excepted) .....	3	.....	.....	.....	.....	3
Total, Class 6 .....	97	38	9	22	12	178
CLASS 7.—PUERPERAL CONDITION.						
Accidents of Pregnancy.....	68	.....	1	1	2	72
Other Accidents of Childbirth.....	3	.....	.....	.....	.....	3
Puerperal Septicæmia.....	3	.....	.....	5	1	9
Puerperal Phlegmasia alba dolens .....	1	.....	.....	.....	1	2
Puerperal Diseases of the Breast .....	.....	.....	.....	.....	.....	.....
Illegal Operation .....	.....	.....	.....	.....	.....	.....
Normal Childbirth.....	.....	.....	.....	.....	1	1
Puerperal Hæmorrhage .....	.....	.....	.....	.....	.....	.....
Following Childbirth not defined.....	.....	.....	.....	1	.....	1
Total, Class 7 .....	75	.....	1	7	5	88
CLASS 8.—DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE.						
Gangrene.....	.....	.....	.....	.....	.....	.....
Carbuncle.....	5	.....	.....	.....	.....	5
Phlegmon, Acute Abscess .....	59	2	.....	2	3	66
Other Diseases of the Skin and Adnexa .....	63	8	1	1	12	85
Scabies.....	.....	1	.....	.....	.....	1
Elephantiasis .....	.....	.....	.....	.....	.....	.....
Total, Class 8 .....	127	11	1	3	15	157
CLASS 9.—DISEASES OF THE ORGANS OF LOCOMOTION.						
Non-tuberculous Diseases of the Bones.....	7	3	2	1	7	20
Arthritis and other Diseases of the Joints (Tuberculosis and Rheumatism excepted). ..	14	9	.....	.....	1	24
Other Diseases of the Organs of Locomotion .....	3	3	.....	.....	.....	6
Total, Class 9 .....	24	15	2	1	8	50

TABLE IX.—Return of the Number of Persons under Treatment, &c.—*continued*.

	Discharged during the year.				Remaining in on 31st December, 1914.	Total.
	Cured.	Relieved.	Un- relieved.	Died.		
CLASS 10.—MALFORMATION.						
Congenital Malformation .....	6	.....	.....	.....	.....	6
Total, Class 10 .....	6	.....	.....	.....	.....	6
CLASS 11.—INFANCY.						
Newly-born Infants leaving Hospital, &c., without having been ill .....	7	.....	.....	.....	.....	7
Congenital Debility of Children .....	.....	.....	.....	1	.....	1
Other Diseases Peculiar to Early Infancy .....	.....	.....	.....	1	.....	1
Total, Class 11 .....	7	.....	.....	2	.....	9
CLASS 12.—OLD AGE.						
Senile Debility .....	.....	89	1	...	51	141
Total, Class 12 .....	.....	89	1	.....	51	141
CLASS 13.—VIOLENCE.						
Scalds .....	4	.....	.....	.....	.....	4
Crushed Hand.....	1	.....	.....	.....	.....	1
Poisoning .....	.....	.....	.....	.....	.....	.....
Bite of Snake or Insect .....	.....	.....	.....	.....	.....	.....
Firearms Accidents .....	2	.....	.....	.....	.....	2
Cutting Instruments .....	6	.....	.....	1	.....	7
Burning by Fire.....	3	.....	.....	1	1	5
Falls .....	6	1	.....	.....	.....	7
Machines.....	1	2	.....	.....	.....	3
Railways and Tramways .....	.....	3	.....	.....	.....	3
Injury by Vehicles and Horses .....	11	.....	.....	.....	.....	11
Injuries by Animals .....	2	.....	.....	.....	.....	2
Starvation .....	.....	.....	.....	.....	.....	.....
Other injuries .....	2	.....	.....	.....	.....	2
Fractures .....	10	.....	.....	.....	1	11
Dislocations.....	.....	.....	.....	.....	1	1
Sprains .....	1	.....	.....	.....	.....	1
Total, Class 13 .....	49	6	.....	2	3	60
CLASS 14.—ILL-DEFINED DISEASES.						
Ill-defined Organic Diseases.....	.....	.....	.....	.....	.....	.....
Unspecified or ill-defined Causes.....	29	1	.....	1	.....	31
Heart Failure.....	.....	.....	.....	.....	.....	.....
No Disease .....	.....	.....	.....	.....	.....	.....
Total, Class 14 .....	29	1	.....	1	.....	31
SUMMARY.						
Total, Class 1.—General Diseases .....	2,012	463	39	70	259	2,843
„ 2.—Diseases of the Nervous System and of the Organs of Special Sense .....	27	26	8	3	9	73
„ 3.—Diseases of the Circulatory System .....	76	36	4	15	11	142
„ 4.—Diseases of the Respiratory System .....	114	18	.....	13	12	157
„ 5.—Diseases of the Digestive Organs .....	333	27	8	10	23	401
„ 6.—Diseases of the Genito-Urinary System and Adnexa .....	97	38	9	22	12	178
„ 7.—Puerperal Condition.....	75	.....	1	7	5	88
„ 8.—Diseases of the Skin and of the Cellular Tissue .....	127	11	1	3	15	157
„ 9.—Diseases of the Organs of Locomotion .....	24	15	2	1	8	50
„ 10.—Malformation.....	6	.....	.....	.....	.....	6
„ 11.—Infaney .....	7	.....	.....	2	.....	9
„ 12.—Old Age .....	.....	89	1	.....	51	141
„ 13.—Violence .....	49	6	.....	2	3	60
„ 14.—Ill-defined Diseases .....	29	1	.....	1	.....	31
Grand Total .....	2,976	730	73	149	408	4,326

TABLE X.—Operations performed during 1914.

	Recovered.		Died.		Total.
	Male.	Female.	Male.	Female.	
I.—Alimentary System.					
Teeth extraction.....	7	9			16
Removal of adenoids and tonsils.....	39	31			70
Repair of cleft palate .....					
Pylorectomy .....					
Gastro-enterostomy .....	1				1
Cholecystotomy .....	2	1	1		4
Hydatid of Liver .....	1	2			3
Laparotomy for—					
Typhoid perforation .....					
Intestinal obstruction.....					
Hydatids of peritoneum.....					
Peritonitis .....		1		1	2
Exploratory .....	1	2			3
Dilation of œsophagus .....		1			1
Appendicectomy.....	23	14			37
Rectal examination .....	1				1
Hernia—					
Umbilical.....	2				2
Inguinal .....	29	2			31
Femoral .....	2	1			3
Inguinal strangulated.....		2			2
Ventral.....					
Incisional.....	1	2			3
Incarcerated.....	1				1
Hæmorrhoids .....	21	1			22
Fistula in Ano and Ischio-rectal abscess.....	9	3			12
Sigmoidoscopic examination .....	1	1			2
Cholalithotomy.....	1	2			3
Entero-enterostomy.....		1			1
Incision into parotid gland.....				1	1
	142	76	1	2	221
II.—Genito-Urinary System.					
Circumcision .....	14				14
Prostatic abscess .....	1				1
Prostatectomy .....	3				3
Orchidectomy .....	2				2
Suprapubic cystotomy .....	1				1
Dorsal slit.....	4				4
Nephrolithotomy .....		1			1
Perineal abscess .....	6				6
Varicocele.....	30				30
Hydrocele.....	9				9
Cystoscopic examination .....		1			1
Suprapubic lithotomy .....	1				1
Excision of urethral caruncle .....		1			1
Orchidopexy .....	2				2
	73	3			76
III.—Cellular and Cutaneous System.					
Opening abscess .....	48	24		1	73
Curetting sinuses.....	7	7			14
Removing sebaceous cyst .....	1				1
Excision of carbuncle .....	2				2
Carbuncle, curetting .....	1	1			2
Incision for cellulitis .....			1		1
Plastic operation .....	9	2			11
	68	34	1	1	104
IV.—Reproductive System.					
Curettage .....		67		1	68
Examination P.V. ....		7			7
Swabbing vagina.....					
Removing urethral caruncle.....					
Colpotomy.....					
Perinæorrhaphy .....		1			1
Plastic operation on vulva .....					
Repair of cervix and perinæum .....					
Repair of cervix .....					
Dilatation of cervix .....		1			1
Insertion of pessary .....					
Packing uterus .....		3			3
Hysterectomy.....					
Opening pelvic abscess .....		3			3
Salpingo-oophorectomy.....		1			1
Ectopic gestation .....		2			2
Alexander's operation .....					
Placenta prævia .....					
Amputation of breast.....					
Packing vagina.....		1			1
		86		1	87

NOTE.—"Recovered" means lived 10 days or more after operation.



TABLE X.—Operations performed during 1914—*continued*.

	Recovered.		Died.		Total.
	Male.	Female.	Male.	Female.	
V.—Ossous and Arthritic System.					
Curetting metacarpal bone .....	1	.....	.....	.....	1
Sequestrotomy .....	4	2	.....	.....	6
Amputation of finger.....	2	.....	.....	.....	2
Amputation of toe .....	3	.....	.....	.....	3
Excision of knee joint .....	1	.....	.....	.....	1
Examination of leg .....	1	.....	.....	.....	1
Fractures, dislocations .....	3	3	.....	.....	6
Tentomy .....	5	1	.....	.....	6
Plating bone .....	1	.....	.....	.....	1
Osteotomy, sequestrotomy .....	4	.....	.....	.....	4
Foreign body in knee-joint.....	1	.....	.....	.....	1
Opening knee-joint .....	2	1	.....	.....	3
Opening hip-joint .....	1	1	.....	.....	2
Breaking down adhesions .....	4	6	.....	.....	10
Trephining skull.....	.....	1	.....	.....	1
Mastoid operations.....	1	.....	.....	1	2
Myotomy.....	1	.....	.....	.....	1
Opening into frontal sinus.....	.....	1	.....	.....	1
Removing cartilage from knee .....	.....	1	.....	.....	1
Opening autrum of Highmore .....	.....	1	.....	.....	1
Laminectomy .....	.....	1	.....	.....	1
Curetting tendon sheath .....	.....	1	.....	.....	1
	35	20	.....	1	56
VI.—Respiratory System.					
Paracentesis thoracis.....	5	2	.....	.....	7
Empyema.....	.....	.....	.....	.....	.....
Hydatoid of lung .....	.....	1	.....	.....	1
	5	3	.....	.....	8
VII.—Circulatory System.					
Varicose veins .....	4	2	.....	.....	6
Exploring external sinus .....	.....	.....	1	.....	1
	4	2	1	.....	7
VIII.—Lymphatic System.					
Removal cervical glands .....	3	.....	.....	.....	3
Incising cervical glands.....	2	.....	.....	.....	2
	5	.....	.....	.....	5
IX.—New Growths (Glands).					
Excision of malignant glands.....	1	.....	.....	.....	1
Carcinoma of breast .....	1	2	.....	.....	3
Rodent ulcer .....	.....	1	.....	.....	1
Removing lipoma.....	.....	1	.....	.....	1
Removing excision of cyst.....	6	.....	.....	.....	6
Excision of growth from nose .....	1	.....	.....	.....	1
Excision of dermoid cyst .....	1	.....	.....	.....	1
Excision of growth from hand.....	.....	1	.....	.....	1
Excision of nectal polypus .....	1	.....	.....	.....	1
	11	5	.....	.....	16
X.—Miscellaneous.					
Injecting salvarsan .....	.....	3	.....	.....	3
Examination under anæsthetic.....	1	2	.....	.....	3
Removal of foreign body from hand .....	.....	1	.....	.....	1
Extraction of bullet.....	1	1	.....	.....	2
Changing dressing .....	.....	1	.....	.....	1
Removing hydatid cyst of leg .....	.....	1	.....	.....	1
Exploratory incision .....	1	.....	.....	.....	1
Removal of fish hook .....	1	.....	.....	.....	1
Removal of splinter from hand .....	1	.....	.....	.....	1
Excision of anthrax pustule.....	.....	.....	1	.....	1
	5	9	1	.....	15

NOTE.—"Recovered" means lived 10 days or more after operation.

TABLE X.--Operations performed during 1914--continued.

	Recovered.		Died.		Total.
	Male.	Female.	Male.	Female.	
XI.—Dual Operations.					
Inguinal hernia and circumcision .....	2	.....	.....	.....	2
Extraction of teeth and incision of abscess .....	3	1	.....	.....	4
Varicocele and circumcision .....	2	.....	.....	.....	2
Salpingo-oophorectomy appendicectomy and curettage .....	.....	1	.....	.....	1
Appendicectomy and curettage .....	.....	1	.....	.....	1
Extraction of teeth and removal of adenoids .....	1	1	.....	.....	2
Opening abscess and curetting sinus .....	1	.....	.....	.....	1
Appendicectomy and inguinal hernia .....	2	.....	.....	.....	2
Appendicectomy and removal of adenoids .....	.....	1	.....	.....	1
Curettage and trachelorrhaphy .....	.....	4	.....	.....	4
Varicose veins and hæmorrhoids .....	1	.....	.....	.....	1
Varicocele and hæmorrhoids.....	1	.....	.....	.....	1
Varicocele and varicose veins.....	1	.....	.....	.....	1
Pelvic examination and breaking down adhesions .....	.....	1	.....	.....	1
Salpingectomy and appendicectomy.....	.....	1	.....	.....	1
Curettage, trachelorrhaphy, and external shortening.....	.....	2	.....	.....	2
Curettage, trachelorrhaphy, and internal shortening ...	.....	1	.....	.....	1
Inguinal hernia and fistula in ano .....	1	.....	.....	.....	1
Opening abscess and circumcision.....	1	.....	.....	.....	1
Incisional hernia and appendiceal abscess .....	1	.....	.....	.....	1
Perineorrhaphy and external shortening .....	.....	1	.....	.....	1
Curettage, perineorrhaphy, and external shortening .....	.....	1	.....	.....	1
Curettage, suturing uterus, and external shortening.....	.....	1	.....	.....	1
Hæmorrhoids and removal of cyst .....	2	.....	.....	.....	2
Appendicectomy and internal shortening .....	.....	2	.....	.....	2
Dorsal slit and incision of bubo.....	1	.....	.....	.....	1
Curettage, appendicectomy, and external shortening ...	.....	1	.....	.....	1
Amputation of toe and incision of abscess.....	1	.....	.....	.....	1
	21	20	.....	.....	41

NOTE.—“ Recovered ” means lived 10 days or more after operation.

Aræsthetic Us d.

Ether .....	455
Chloroform and ether .....	75
Chloroform .....	18
Kelene and ether .....	16
Kelene .....	68
Cocaine .....	2
Beta eucaine .....	16
Kelene, ether, and chloroform .....	1
Anæsthetic not stated .....	5

Total..... 656

TABLE XI.--Statement of Working Expenses of the Coast Hospital for the year 1914.

MAINTENANCE AND TREATMENT OF PATIENTS AND STAFF.

	1914.					
	Amount.			Average.		
	£	s.	d.	£	s.	d.
A. Salaries and Wages—						
1. Administrative .....	1,278	1	8	.....	.....	.....
2. Medical .....	1,400	2	6	.....	.....	.....
3. Clerical .....	512	6	8	.....	.....	.....
4. Dispensary .....	213	19	0	.....	.....	.....
5. Nursing .....	7,128	18	0	.....	.....	.....
9. Laundry .....	490	12	10	.....	.....	.....
10. Tradesmen and Mechanics .....	1,445	15	6	.....	.....	.....
11. Cleaning and General .....	2,447	19	0	39	19	7½
	14,917	15	2			
B. Provisions—						
1. Meat .....	1,176	1	1	3	3	0½
2. Milk .....	1,128	3	9	3	0	5½
3. Butter .....	546	12	4	1	9	3
5. Bread and Flour .....	494	18	10	1	6	6½
6. Eggs .....	461	4	7	1	4	8¾
7. Fish, Fresh .....	577	1	7	1	10	11¾
8. Poultry .....	71	14	6	0	3	10
9. Groceries .....	1,688	7	6	4	10	6
10. Vegetables and Fruit .....	958	10	8	2	11	4½
11. Ice .....	70	16	11	0	3	9½
	7,173	11	9			
C. Drugs and Surgical Appliances—						
1. Drugs, &c. ....	1,551	18	5	4	3	2
2. Dressings and Bandages .....	165	18	2	0	8	10¾
3. Surgical Appliances, Renewals .....	57	18	2	0	3	1
4. Surgical Instruments, Renewals .....	27	19	1	0	1	6
5. Stimulants .....	19	19	2	0	1	0½
	£1,823	13	0			

TABLE XI.—Statement of the Working Expenses of the Coast Hospital—*continued*.

	1914.					
	Amount.			Average.		
D. Fuel, Light, and Power—	£	s.	d.	£	s.	d.
1. Coal, Coke, and Wood .....	968	4	5	2	11	10
4. Electricity.....	426	4	11	1	2	10½
5. Electrical Fittings, Renewals .....	38	3	10	0	2	0½
	1,432	13	2			
E. Domestic—						
1. Bedding and Bed Linen .....	303	1	5	0	16	3
2. Clothing .....	172	2	7	0	9	2¾
3. Drapery.....	160	11	7	0	8	7½
4. Uniforms .....	309	10	11	0	16	7
5. Renewals of Furniture .....	22	16	1	0	1	2¾
6. Ironmongery, Cutlery, &c. ....	85	11	8	0	4	6½
7. Brushware, Earthenware, &c. ....	82	5	11	0	4	5
8. Laundry Materials .....	120	15	7	0	6	5¾
	1,256	15	9			
F. Printing and Stationery—						
1. Printing and Stationery .....	29	7	7	0	1	7
3. Postage .....	11	15	6	0	0	7½
	41	3	1			
G. Maintenance of Buildings and Grounds—						
1. Ordinary Repairs and Alterations .....	502	1	11	1	6	11½
	502	1	11			
J. Miscellaneous—						
1. Rates and Taxes .....	23	4	2	0	1	3
2. Insurance .....	118	13	2	0	6	4½
3. Burials and Coffins .....	15	15	11	0	0	10½
4. Telephones .....	41	12	8	0	2	2¾
7. Petty Expenses .....	84	16	3	0	4	6½
8. Unclassified .....	106	9	0	0	5	8½
	390	11	2			
K. Extraordinary Expenditure—						
1. Surgical Instruments .....	13	0	1	0	0	8½
2. Appliances .....	54	3	4	0	2	10¾
3. Machinery .....	87	7	0	0	4	8½
4. New Furniture .....	25	17	0	0	1	4½
5. New Buildings and Additions .....	39	18	0	0	2	1½
	220	5	5			
Farm and Garden, Live Stock, &c.—						
Purchase of Horses and Cows.....	107	0	0	0	5	9
Purchase of Fodder .....	158	7	7	0	8	6
Miscellaneous (Fencing, &c.) .....	228	9	4	0	12	3
	£	s.	d.	28,252	7	4
	28,252	7	4			
Add value of goods received from other Institutions .....	72	1	5			
	28,324	8	9			
Deduct value of goods supplied to other Institutions .....	66	11	2			
	28,257	17	7			
Add value of Stock on hand, 31st December, 1913 .....	1,213	16	4			
	29,471	13	11			
Deduct value of Stock on hand, 31st Dec., 1914...	1,002	18	0			
	28,468	15	11			
Deduct Collections paid to Revenue .....	719	9	4			
	503	0	9			
	£27,749	6	7			
TOTAL COST .....	£27,749	6	7			
Cost per occupied bed .....					£74	7 5

TABLE XII.—Amount expended from vote of Public Works Department, not included in the foregoing statement :—

	£	s.	d.
New steam mangle ... ..	291	18	6
Strengthening of embankment carrying main sewer and water service ... ..	1,050	6	1
Road repairs ... ..	20	10	10
Ward XVII alterations and repairs ... ..	100	4	11
Total ... ..	£1,463	0	4





## 2.—LEPER LAZARET.

TWENTY-FOURTH REPORT ON LEPROSY IN NEW SOUTH WALES, FOR THE YEAR  
ENDED 31ST DECEMBER, 1914.

The Acting Medical Superintendent of the Coast Hospital to the Director-General  
of Public Health.

The Coast Hospital, Little Bay, Sydney, N.S.W.,

Sir,

14 September, 1915.

On 1st January, 1914, 21 persons remained under detention at the lazaret.  
[See Appendix A.]

During the year four persons were reported to the Board under the Public Health Act, 1902, Part III, as being suspected lepers, and after careful inquiry were duly certified as suffering from leprosy, and admitted to the lazaret by warrant of the Board.

One death occurred during the year—W.M. a Kanaka, admitted in 1903; Case LXXXVI.

From the Summary column of Appendix A it will be seen that the total number of persons admitted since 1883, when patients first began to be received (though the notification of leprosy was first made compulsory and the detention of lepers provided for by law only towards the end of 1890), is 134.\* Distributed under nationalities, the account stands as follows :—

	Admitted.	Died.	Discharged.	Repatriated.	Remaining in at 31 Dec., 1914.
Whites, of European descent—					
New South Wales .....	34	20	5	...	9
Victoria .....	1	...	...	...	1
Queensland .....	1	1	...	...	...
New Zealand.....	1	1	...	...	...
Fiji .....	2	1	...	...	1
England .....	9	5	2	...	2
Ireland.....	5	3	1	...	1
Germany .....	2	2	...	...	...
Belgium .....	1	1	...	...	...
Greece .....	1	...	...	1	...
U.S. of America .....	1	1	...	...	...
Coloured patients—					
China .....	50	16	...	32	2
India .....	3	2	1 (absconded).	...	...
West Indies .....	1	...	1 (in 1885).	...	...
Java .....	1	...	...	...	1
Pacific Islands .....	16	6	...	4	6
New Caledonia .....	1	1	...	...	...
Zanzibar .....	1	...	1 (to Hong Kong at own request).	...	...
Egypt.....	1	...	...	1	...
Syria.....	2	...	...	1	1
	134	60	11	39	24

\* This is the number of persons admitted; it does not agree with the highest number given in Appendix B in Roman numerals, which indicates the number of cases observed, whether admitted or merely described and recorded.

Thus the number remaining in the lazaret on 31st December, 1914, was 24 persons.

Appendix B

STATE HOSPITALS AND ASYLUMS OF NEW SOUTH WALES.

Chart showing the Variation in the Total Inmate Population each Year since the Year 1890.

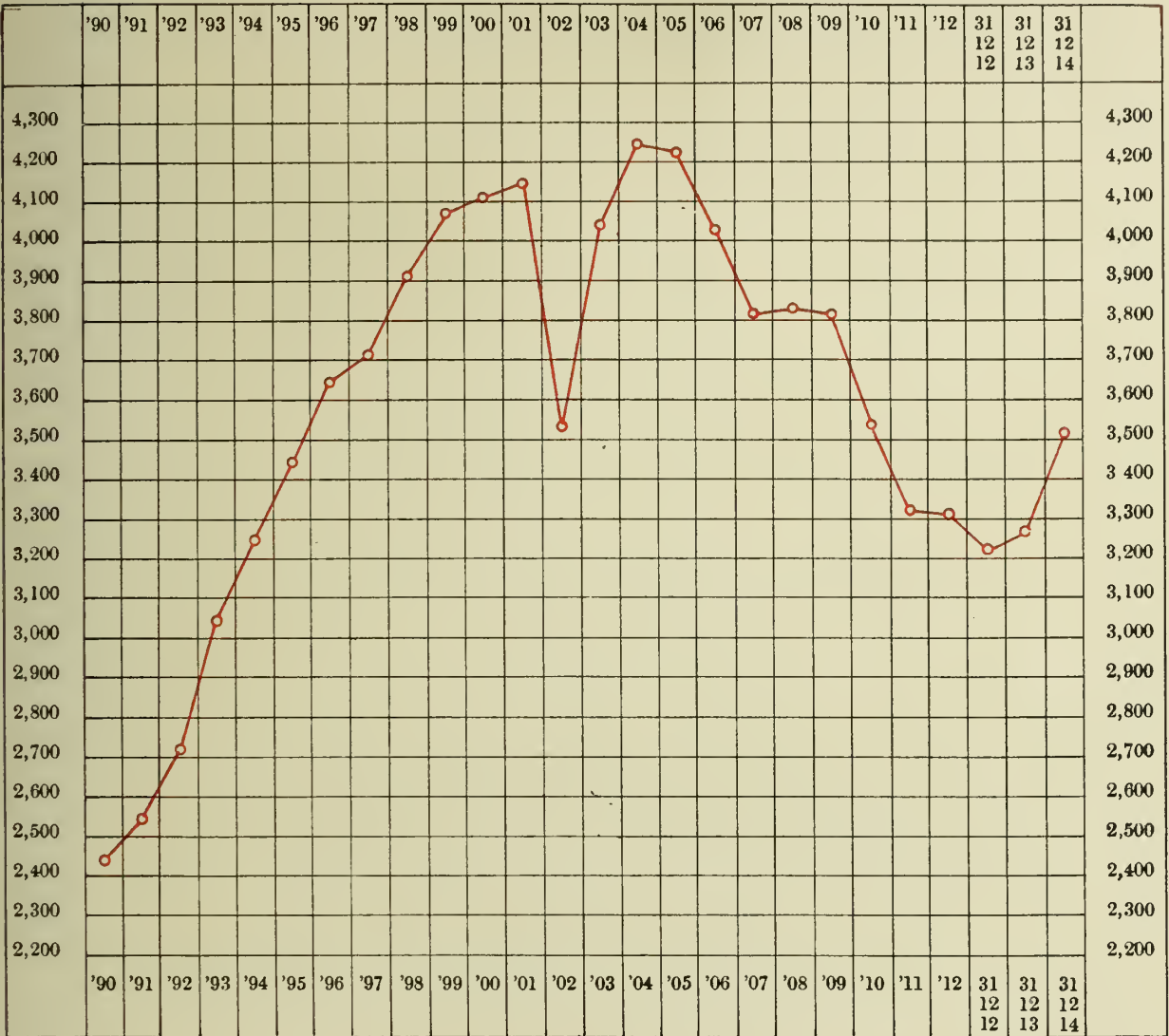
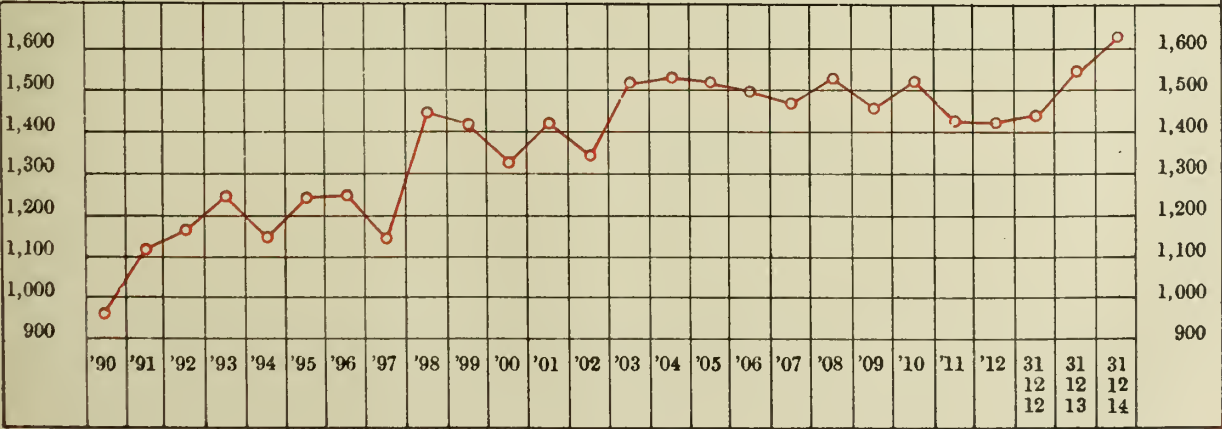


Chart showing the Variation from Year to Year amongst Hospital Patients only.







Appendix B shows particulars of each case under detention since the year 1883, and in Appendix C are given the usual notes of the new patients received during the year under review.

Every opportunity has been offered to members of the medical profession to visit the lazaret for the purpose of seeing such patients as were formerly under their care, or for study of the disease.

The following statements show the expenditure for the year, and the sources from which it has been defrayed :—

STATEMENT showing the Working Expenses of the Lazarets (for men and for women) at Little Bay for the year 1914.

	£	s.	d.
Salaries .....	793	2	1
Provisions .....	633	17	9
Fruits and vegetables.....	132	2	3
Uniforms, clothing, &c. ....	94	8	0
Printing and stationery .....	8	3	10
Fuel and light .....	96	16	6
Repairs .....	70	16	3
Wines, ale, &c. ....	13	19	10
Drapery .....	31	8	10
Ironmongery, brushware, &c. ....	9	2	6
Drugs .....	39	1	4
Sundries .....	187	16	8
Total .....	2,116	15	10

Average number of patients resident, 22·61, being equal to an average of £93 12s. 5½d. per inmate per annum.

STATEMENT showing the total Expenditure of the Lazarets (for men and for women) at Little Bay during the year 1914, and from what sources the amounts were paid.

EXPENDITURE.	£	s.	d.	HOW PAID.	£	s.	d.
To working expenses, as per attached statement.	2,116	15	10	From vote—Maintenance of lepers by Department of Public Health	1,873	3	8
				Transfers from Coast Hospital stock	243	12	2
Total .....	2,116	15	10	Total .....	2,116	15	10

The needs of the patients have been carefully supplied by experienced attendants and nurses, under direct supervision of myself and the Matron of the Coast Hospital, and, as in the past, every means have been adopted to alleviate their sufferings and to mitigate the hardships of their detention.

I have, &c.,

D. WALLACE,

Acting-Medical Superintendent.

[illegible]

\* Discharged on the 29th December, 1885, his sores having healed and there being no law warranting his detention. † One patient, J.L., reported 18th December, 1891, was removed to Little Bay on 12th January, 1892. ‡ Re-admitted, 19th August, 1907. Repatriated:—a 14th August, 1890; b 17th July, 1897; c 6th August, 1901; d 13th June, 1905; e 23rd June, 1905; f 1st November, 1903; g 9th May, 1908; h 1st December, 1908.



## APPENDIX B.

RETURN showing Particulars of Lepers detained at Little Bay, New South Wales, since the year 1883.

Name.	Sex.	Native of—	Occupation.	Admission.		Where from.	No. of Case in Clinical Notes.	Died or Discharged.
				Age on	Date of			
A.H. ...	Male ...	China .....	Gardener .....	42	19 April, 1883	Parramatta Asylum	.....	Died, 15 May, 1886.
J.H. ...	"	"	"	32	19 " "	"	.....	Died 27 June, 1886.
A.H. ...	"	"	"	34	12 June, " "	"	.....	Died, 20 April, 1886.
A.M. ...	"	"	Butcher .....	32	28 Oct., " "	Tenterfield .....	XIV	Returned to China, 14 Aug., 1896.
A.P. ...	"	"	Storekeeper .....	27	28 " " "	Willow Creek .....	XV	
G.H. ...	"	"	Labourer .....	37	27 " 1884	Sydney .....	.....	† Died, 24 Dec., 1886.
K.K. ...	"	"	"	24	21 Dec., " "	Bathurst .....	.....	Died, 23 April, 1885.
J.B. ...	"	West Indies ...	"	51	22 Sept., 1885	Bermagui .....	.....	† Discharged, 29 Dec., 1885.
A.Y. ...	"	China .....	Gardener .....	29	23 Dec., " "	Sydney .....	.....	Died, 6 Feb., 1890.
C.B. ...	"	"	"	32	29 Jan., 1886	Alexandria .....	XVI	Returned to China, 14 Aug.; 1896.
A.S. ...	"	"	Tin-miner .....	42	20 Feb., " "	Cooper's Creek .....	.....	Died, 12 Nov., 1890.
C.T. ...	"	Java .....	Groom .....	24	14 Aug., " "	Castle Hill, Parramatta.	XVII	
A.L. ...	"	China .....	Gardener .....	44	20 May, 1887	Bathurst .....	.....	Died, 12 April, 1891.
Y.S. ...	"	"	Carpenter .....	31	20 April, 1888	Sydney .....	XVIII	Returned to China, 14 Aug.; 1896.
*F.G. ...	"	N.S.W. ....	Plasterer .....	27	21 Aug., " "	"	I	Died, 25 Sept., 1892.
A.Y. ...	"	China .....	Gardener .....	29	30 Sept., " "	Inverell .....	XIX	Returned to China, 14 Aug., 1896.
L.P. ...	"	"	Carpenter .....	18	22 Dec., " "	Sydney .....	XX	
H.K. ...	"	"	Miner .....	28	23 Mar., 1889	Enfield .....	XXI	Died, 13 May, 1894.
*H.B. ...	"	N.S.W. ....	"	17	17 Dec., " "	Mudgee .....	II	
*H.R. ...	"	"	Labourer .....	28	8 Aug., 1890	Richmond River ...	III	Died, 29 May, 1901.
*A.G. ...	"	"	Schoolboy .....	14	18 " "	Balmain .....	IV	Discharged, 1 May, 1895.
*E.U. ...	"	"	Labourer .....	23	16 Jan., 1891	Sydney .....	V	Died, 1 May, 1893.
*H.S. ...	"	"	Mariner .....	41	23 " "	Newtown .....	VI	Died, 4 Feb., 1891.
A.L. ...	"	China .....	Gardener .....	30	26 Feb., " "	Newcastle .....	XXIII	Died, 28 Dec., 1895.
*M.R. ...	Female	N.S.W. ....	Domestic duties ...	33	11 Mar., " "	Surry Hills .....	VII	Died, 20 June, 1892.
T.W. ...	Male ...	China .....	Cook .....	29	6 Aug., " "	Narrandera .....	XXV	Returned to China, 14 Aug., 1896.
W.C. ...	"	"	Labourer .....	40	27 " "	Sydney .....	XXIV	
A.H. ...	"	"	Storekeeper .....	25	18 Sept., " "	Mudgee .....	XXII	Died, 7 May, 1901.
J.L. ...	"	Tanna .....	Labourer .....	25	8 Dec., " "	Clarence River .....	XXVI	
*R.W. ...	"	N.S.W. ....	Carpenter .....	47	24 " "	Narrabri .....	VIII	Died, 27 Mar., 1896.
*I.L. ...	Female	"	Domestic duties ...	53	18 " "	Waverley .....	IX	Died, 16 June, 1899.
A.S. ...	Male ...	China .....	Cabinetmaker .....	28	21 April, 1892	Sydney .....	XXVII	Died, 29 June, 1892
*C.D. ...	"	N.S.W. ....	Carpenter .....	24	30 " "	Gunnedah .....	X	Died, 17 Aug., 1900.
S.P. ...	"	England .....	Commercial traveller	49	7 June, " "	Sydney .....	XI	Died, 28 May, 1898.
H.G. ...	"	China .....	Wood-cutter .....	47	19 Sept., " "	"	XXVIII	Returned to China, 11 Aug., 1896.
*M.E.K. ...	Female	N.S.W. ....	Domestic duties ...	43	21 " "	North Sydney .....	XII	Died, 23 July, 1897.
L.P.H. ...	Male ...	China .....	Gardener .....	44	12 Oct., " "	Manly .....	XXIX	Returned to China, 14 Aug., 1896.
W.W. ...	"	Fiji .....	Schoolboy .....	13	27 " "	Sydney .....	XIII	Died, 26 Jan., 1901.
A.L. ...	"	China .....	Gardener .....	35	3 Nov., " "	Bombala .....	XXXI	Returned to China, 17 July, 1897.
A.Q. ...	"	"	Dealer .....	39	15 " "	"	XXXII	Returned to China, 14 Aug., 1896.
J.C. ...	"	"	"	38	29 " "	Sydney .....	XXXIII	Died, 2 Aug., 1893.
A.G. ...	"	"	Labourer .....	26	7 Dec., " "	Parramatta .....	XXX	Returned to China, 14 Aug., 1896.
G.Y. ...	"	"	Cook .....	68	31 " "	Sydney .....	XXXIV	
A.P. ...	"	"	Hawker .....	33	21 Jan., 1893	Parramatta .....	XXXV	Died, 10 Sept., 1895.
M.M. ...	Female	New Zealand...	"	24	27 Feb., " "	Fiji .....	XXXVI	
A.T. ...	Male ...	China .....	Bushman .....	28	15 April, " "	Cooma .....	XXXVII	Returned to China, 14 Aug., 1896.
*N.G. ...	"	N.S.W. ....	Miner .....	61	21 " "	Parramatta Asylum	XXXVIII	Died, 4 April, 1896.
*A.M. ...	Female	"	Housewife .....	35	7 Sept., " "	Balmain .....	XXXIX	Died, 13 Mar., 1896.
P.M. ...	Male ...	India .....	Hawker .....	47	3 Nov., " "	Newcastle .....	XL	Died, 23 Mar., 1899.
*E.R. ...	Female	N.S.W. ....	Domestic duties ...	16	18 " "	West Maitland .....	XLI	Died, 21 Sept., 1900.
C.H.M. ...	Male ...	Germany .....	Station overseer ...	65	25 Jan., 1894	Sydney .....	XLII	Died, 8 July, 1898.
W.H.D. ...	"	Queensland ...	"	21	18 April, " "	"	XLIII	Died, 29 Nov., 1896.
G.N. ...	"	New Caledonia	Pearl-diver .....	20	16 July, " "	"	XLIV	Died, 1 Sept., 1895.
*H.J.T. ...	"	N.S.W. ....	Bushman .....	52	10 Oct., " "	"	XLV	Discharged, 5 Sept., 1902.
K.J. ...	"	India .....	Hawker .....	30	30 Nov., " "	"	XLVI	Died, 2 Aug., 1895.
J.T. ...	"	England .....	Labourer .....	70	4 April, 1895	Coast Hospital .....	XLVIII	Died, 6 Nov., 1897.
T.O.R. ...	"	Ireland .....	"	70	2 Oct., " "	Sydney .....	LII	Died, 8 Nov., 1895.
W.F. ...	"	"	Clerk .....	40	8 " "	"	LII	Died, 8 Nov., 1896.
H.J. ...	"	China .....	Hawker .....	31	21 Jan., 1896	Coast Hospital .....	LIV	Returned to China, 14 Aug., 1896.
H.Y. ...	"	"	Gardener .....	26	4 Feb., " "	"	LIV	
A.T. ...	"	"	"	31	25 Dec., " "	Oxley .....	LVI	Returned to China, 17 July, 1897.
F.R. ...	"	Belgium .....	Mechanic .....	55	16 Feb., 1897	Coast Hospital .....	LVIII	Died, 23 June, 1897.
H.W. ...	"	U.S.A. ....	Mariner .....	57	12 Nov., " "	Lord Howe Island .	LIX	Died, 14 May, 1911.
*W.W. ...	"	N.S.W. ....	Labourer .....	19	26 Feb., 1898	Wollongong .....	LXI	Died, 21 Feb., 1900.
*A.B. ...	"	"	"	20	22 Mar., " "	Gunnedah .....	LXIV	Died, 7 July, 1901.
*R.C. ...	"	"	Butcher .....	27	9 July, " "	Wollongong .....	LXII	Died, 30 April, 1903.
A.G. ...	Female	China .....	Housewife .....	38	23 Sept., " "	Waterloo .....	LXVI	Died, 4 Feb., 1901.
*J.F.D. ...	Male ...	N.S.W. ....	Labourer .....	26	11 July, 1899	Lismore .....	LXVII	Died, 30 Mar., 1907.
C.P. ...	"	China .....	Sculleryman .....	22	14 April, 1900	Sydney .....	LXVIII	Died, 16 May, 1903.
B.A. ...	"	Aoba Island ...	Labourer .....	35	26 Feb., 1901	Murwillumbah .....	LXIX	Returned to Aoba, 1 Dec., 1902.
C.T. ...	Female	Germany .....	Housewife .....	29	23 April, " "	Lismore .....	LXX	Died, 14 Dec., 1903.

\* These are all natives of New South Wales, of European descent. † This patient was transferred to a Hospital for the Insane on 2nd April, 1885, where also his death occurred. ‡ See note \* to Appendix A. § Date of report. These patients were afterwards removed to Little Bay. Of European descent.

Patients remaining under treatment have their initials shown in black-faced type.

RETURN

RETURN showing Particulars of Lepers detained at Little Bay, New South Wales, since the year 1883—*continued*.

Name.	Sex.	Native of—	Occupation.	Admission.		Where from.	No. of Case in Clinical Notes.	Died or Discharged.
				Age on	Date of.			
*D.N. ...	Male ...	N.S.W. ....	Labourer .....	18	4 June, 1901	Glen Innes .....	LXXI	Died, 28 Feb., 1905.
J.S. ....	"	"	Farmer .....	52	20 " "	Miller's Forest .....	LXXII	Discharged, 28 Feb., 1902.
*D.L. ...	"	England.....	Labourer .....	46	20 " "	Rookwood Asylum .....	LXXIII	Died, 15 Dec., 1902.
F.H. ....	"	"	Seaman .....	75	4 July, "	Sydney .....	LXXIV	Died, 5 July, 1905.
A.R. ....	"	China .....	Labourer .....	25	30 Oct., "	"	LXXV	} Returned to Hongkong, 6 Aug., 1904.
A.T. ....	"	"	"	35	4 Dec., "	"	LXXVI	
G.Y. ....	"	"	Miner .....	"	8 Jan., 1902	"	LXXVII	
*J.G. ....	"	N.S.W. ....	Grazier.....	57	13 " 1903	"	LXXVIII	Died, 31 Aug., 1904.
M.S. ....	"	Ireland .....	Miner .....	45	20 Feb., "	Paramatta Asylum .....	LXXIX	Died, 19 Feb., 1908.
F.H.L. ...	"	China .....	Gardener .....	32	10 Mar., "	Enfield .....	LXXX	Returned to Hongkong, 6 Aug., 1904.
G.M. ....	"	England.....	Farmer .....	52	7 April, "	Cudgen .....	LXXXI	Discharged, 31 Mar., 1909.
†F.C. ....	"	Fiji .....	School .....	17	7 April, "	Fiji .....	LXXXII	
A.S. ....	"	China .....	Wood-cutter .....	31	21 " "	Canterbury .....	LXXXIII	} Returned to Hongkong, 6 Aug., 1904.
S.V. ....	"	Zanzibar.....	Seaman .....	22	5 May, "	Sydney.....	LXXXIV	
T.B. ....	"	China .....	Cook .....	37	30 June, "	Sydney.....	LXXXV	
W.M. ....	"	Buka Buka ..	Labourer .....	36	3 Nov., "	Tweed River.....	LXXXVI	Died, 14th March, 1914.
*F.E.B. ...	"	N.S.W. ....	Drover .....	27	25 " "	"	LXXXVII	
*G.M.S. ...	Female	"	Housewife .....	19	9 Feb., 1904	Lismore .....	LXXXVIII	
*V.M.W. ...	"	"	"	17	31 Mar., "	Sydney .....	LXXXIX	
*D.D. ....	Male....	"	Teamster.....	54	19 April, "	Botany .....	XC	Discharged, 20 Sept., 1909.
A.M. ....	"	China .....	Farmer .....	24	3 May, "	Tumut .....	XCI	Returned to Hongkong, 6 Aug., 1904.
F.B. ....	"	Mallicolo .....	Labourer .....	39	10 " "	Tweed River.....	XCII	Returned to native island, 9 May, 1908.
W.T. ....	"	England.....	"	65	4 July, "	Sydney .....	XCIII	Discharged, 20 Sept. 1906.
G.W. ....	"	China .....	Labourer .....	32	27 Sept., "	Narrabri .....	XCIV	Returned to Hongkong, 13 June, 1905.
*R.B. ....	"	N.S.W. ....	Coach-painter.....	23	11 Oct., "	Newtown.....	XCV	Discharged, 22 March, 1912.
H.F. ....	"	China .....	Miner .....	45	24 Jan., 1905	Emmaville .....	XCVI	Returned to Hongkong, 13 June, 1905.
S.M. ....	"	Lifu.....	Labourer.....	66	7 Feb., "	Tweed River.....	XCVII	Died, 8 Jan., 1907.
A.S. ....	Female	Egypt .....	Housewife .....	38	7 Mar., "	Sydney .....	XCVIII	Returned to Egypt, 23 June, 1905.
T.H. ....	Male....	Ireland .....	Bullock-driver .....	65	11 July, "	Coast Hospital .....	XCIX	Discharged, 19 Dec., 1905. Readmitted, 19 Aug., 1907. Again discharged, 22 Feb., 1910.
J.W. ....	"	Tanna .....	Labourer .....	40	11 " "	Macleay.....	C	Died, 30 Oct., 1906.
T.A. ....	"	Ambrym .....	"	35	11 " "	"	CI	
H.G. ....	"	Gala .....	"	35	14 Nov., "	Tweed River .....	CII	
G.B. ....	"	Vanua Lava ..	"	38	9 Jan., 1906	"	CV	Died, 31 Aug., 1912.
G.A. ....	"	Ambrym .....	"	35-40	15 Aug., "	"	CVI	Returned to native island, 1 Dec., 1908.
A.M. ....	"	China .....	Gardener .....	30	4 Sept., "	Nyngan .....	CVII	Returned to Hongkong, 9 Nov., 1906.
L.A. ....	"	Ambrym .....	Labourer .....	35	9 Oct., "	Tweed River .....	CVIII	Returned to native island, 9 May, 1908.
C.B. ....	"	China .....	Hawker .....	48	9 " "	Sydney .....	CIX	} Returned to Hongkong, 9 Nov., 1906.
A.M. ....	"	"	Wood-cutter .....	58	9 " "	Glen Innes .....	CX	
W.D. ....	"	Lifu.....	Gardener .....	30	20 Nov., "	Turramurra .....	CXI	
P.S. ....	"	India .....	Hawker .....	35	19 Jan., 1907	Nowra .....	CXII	Died, 2 April, 1910.
C.S.C. ...	Female	Victoria .....	"	40	16 April, "	Maroubra .....	CXIII	Absconded, 18 May, 1907.
Ah J. ...	Male...	China .....	Hawker .....	40	17 Sept., "	Sydney .....	CXIV	
H.F. ....	"	"	Cabinet-maker .....	40	29 Oct., "	Warren .....	CXV	
F.P. ....	"	England.....	None .....	68	14 Jan., 1908	Sydney .....	CXVI	Died, 11 Aug., 1909.
*A.R. ....	Female	N.S.W. ....	School .....	7	14 " "	Lismore .....	CXVII	
T.W.C. ...	Male....	"	Farmer .....	45	18 Mar., 1909	Manilla .....	CXVIII	Died, 2 Nov., 1910.
P.J. ....	"	Syria .....	Hawker .....	54	10 Nov., "	Yalgogrin .....	CXIX	Repatriated, 1 Feb., 1911.
A.Z. ....	"	Greece .....	Sculleryman .....	17	11 Oct., 1910	Sydney .....	CXXII	Repatriated, 1 Feb., 1911.
J.C. ....	"	England.....	Miner .....	48	15 Nov., "	"	CXXIII	
J.A. ....	"	Syria .....	Hawker .....	35	29 " "	"	CXXIV	
C.M. ....	"	Tonga .....	Gardener .....	45	8 June, 1911	North Sydney .....	CXXV	
T.L. ....	"	China .....	Cabinet-maker .....	49	"	Botany .....	CXXVI	Died, 8 Oct., 1911 (before transfer).
M.B. ....	Female	Ireland .....	Teacher .....	33	7 Nov., 1911	Lismore .....	CXXVII	
S.C. ....	Male....	China .....	Cabinet-maker .....	40	21 May, 1912	Boolaroo, N.S.W....	CXXVIII	
L.J.T. ...	"	N.S.W. ....	School .....	12	14 Aug., "	Lismore .....	CXXIX	
S.M. ....	"	Mallicolo .....	Labourer .....	50	27 " "	Macleay.....	CXXX	
J.F. ....	"	N.S.W. ....	Van-driver .....	28	19 Sept., "	Glebe .....	CXXXI	
W.D. ....	"	"	Fisherman.....	22	24 June, 1913	Ulladulla, S. Coast	CXXXII	
J.M. ....	"	New Hebrides	Labourer .....	60	28 Nov., "	Tweed River.....	CXXXIII	
J.C.M. ...	"	N.S.W. ....	Miner .....	26	28 Jan., 1914	Homeville, West Maitland	CXXXIV	
W.B. ....	"	Eng'and .....	Dealer .....	33	4 March, 1914	Sydney .....	CXXXV	
A.C.P. ...	"	N.S.W. ....	School .....	15	23 June, 1914	Lismore.....	CXXXVI	
E.W. ....	"	South Sea Islands	Labourer.....	50	17 Nov., 1914	Cudgen.....	CXXXVII	

\* Native of New South Wales, of European descent. † Of European descent.

NOTES.—(a) The cases of a few other persons who, for one reason or other, were never admitted to the lazaret, have been mentioned in the course of this series of Reports, and are additional to those shown in this Table. (b) On comparison with the reports for early years, differences in ages or dates of admission of some coloured patients will be observed. Those now given are the correct ages and dates.

Patients remaining under treatment have their initials shown in black-faced type.



## I.—NEW CASES.

## APPENDIX C.

CASE CXXXIV.—J.C.M., m., æt. 26; admitted 28th January, 1914.

History.—Born at Young Wallsend, N.S.W., in June, 1887. Has lived all his life in Lower Hunter district, except about five weeks at Bulli in 1905-6, and fourteen weeks at Tamworth about 1911. On leaving school, followed occupation of fisherman, Lake Macquarie, three or four years; then at Dudley coal-mine in blacksmith's shop; thence to Bulli, underground; then Catherine Hill Bay, 18 months. Back at Dudley mine as wheeler, Maitland, five years before admission.

Married six years. Has two children—William Richard, born 1909, and Alma Clara May, born 1911—both healthy. Wife also healthy.

History of illness.—Dates his ill-health from about four and a half years ago, when, after a fall in a mine, he was in Maitland hospital seven days as appendicitis. Since then has been able to work regularly, but has been subject to pains in limbs, especially at night. No excessive epistaxis nor blockage of nose.

Condition on admission.—General height, 5 ft. 6 in.; weight, 8 st. 7 lb. Hair, thin.

Face.—Abnormal bronzing of forehead, infiltration of forehead and eyebrows, smooth and small nodules.

Right eye.—Small nodule inner side of cornea; cheeks, lips, chin and ear bear small nodules. Right cheek—scar where nodule was excised at R.P.A.H.

Trunk.—Many well marked extensive macules on anterior and posterior surface; most marked on abdomen.

Upper limbs.—Brown staining of upper arms, cyanosis and glossiness of forearms and hands, marked ulnar wasting in both hands with ulnar anaesthesia; ulnar and median nerves markedly sclerosed.

B. Leprae (2-2-14) Right naris—abundant, mostly solid stained.

Left naris—	“	“
Left earlobe—	“	fragmented.

Progress notes:—

4th May, 1914—Much improved in appearance and condition.

7th July, 1914—In bed with abdominal pain and vomiting; pain in right elbow for some days.

21st July, 1914—Painful subcutaneous nodules right upper arm and inner aspect of right thigh; feels ill, and cannot eat.

Treatment—Chaulmoorga oil, 15 m., increasing to 135 m., daily, on 15th April. Intermitted 7th July, 1914. Resumed 45 m. daily, 11th August, 1914. Discontinued, finally, 19th September, 1914.

CASE CXXXV.—W.B., m., æt. 33; admitted 4th March, 1914.

History.—Native of Surrey, England. Left there at 13 years, and came with father to Rockhampton, Queensland. Since then has resided continuously at Rockhampton (except for occasional trips, none longer than three weeks). Was apprenticed to bootmaking; served his time, but then started driving a van; did this four years. Then took contract carrying mails to Rockhampton. Then, for past five years, has been a “marine dealer”—bottles, bones, &c.

History of illness.—Health was generally good, except for dengue fever (two weeks) twelve years ago, until about four years ago, when he observed a rash on chest, and about eighteen months later an ulcer on sole of right foot. About twelve or eighteen months ago began to be very weary and disinclined for work; hands affected same time. Nasal obstruction at times, more recently. About December, 1912, was given salvarsan at Rockhampton Hospital. This cleared up some of the rash, and he felt better. Came to Sydney 27th February, 1914.

Condition on admission.—General height, 5 ft. 6½ in.; weight, 7 st. 12½ lb.

Head and neck.—Face generally discoloured, brown, and tending to be cyanosed.

Much infiltration and nodulation, especially of eyebrows, cheeks, chin, and ear-lobes.

Hair of eyebrows deficient, especially on right side; left ear-lobe has discharging sore.

Superficial cervical nerves can be felt enlarged on each side, especially on left; cannot fully close the right eye.

Fauces fairly normal, nares much inspissated discharge, septum intact.

Trunk.—A great deal of dark reddish-brown staining in large and small patches, more profuse on back; sparse on front of chest and abdomen.

Prepuce infiltrated—cannot be retracted; scrotum also infiltrated.

Upper limbs.—Right much discoloured, especially the extensor aspect of upper arm and the forearm and hand. Surrounding the inner condyle is an area of pale skin with definitely raised border. Over the olecranon and the adjacent part of ulna much thickening and infiltration as also along ulnar margin; ulnar nerve enlarged and nodular, and traceable nearly to axilla.

Hand deformed, glossy and atrophied; considerable cyanosis.

Left upper limb almost identical with right, similar pale area over inner condyle; ulnar nerve more affected. Left hand rather less affected than right.

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Lower



Lower limbs.—Right, much discolouration in irregular patches on thigh and leg. Right foot altered in shape through former ulceration. At present has two ulcers on ball of foot. Dead bone removed from one of these. (1st March, 1914).

Left, same but not so marked. Both ext. popliteal nerves enlarged. Reference correct. Says he sweats freely, except on hands and feet.

B. Leprae.—R. naris abundant, singly and clumped, mostly solid stained.

Left naris, no bacilli found.

Left eyebrow, B. Leprae abundant, mostly discrete; staining fragmented.

Right elbow, B. Leprae abundant, mostly discrete, staining fragmented.

Pus from sinus near frenum preputii; very abundant, small bacteria. No G.C. seen.

Some acid fast bacilli longer than ordinary B. Leprae.

7th March, 1914—Laboratory report on prepuce submitted.

3rd March, 1914—Sections show the presence of B. Leprae under the epithelium and in subcutaneous tissues.

1st April, 1914—Amputated second toe of right foot, which had become gangrenous.

Treatment.—Chaulmoogra oil, beginning with 45 m., and increased rapidly to 135 m. daily. Treatment discontinued 7th December, 1914.

CASE CXXXVI.—A.C.P., m., æt. 15; admitted 23rd June, 1914.

History.—He was born at Jiggi Creek, near Lismore, 20th September, 1898.

He has never left Lismore district, though he moved about with his parents to several places; these were, first Jiggi, about 12 miles from Lismore; then Blackbrook, about 5 miles from Lismore; then for several years Lismore; then Casino, about 18 miles from Lismore for two years, and lastly Mummulgum, about 20 miles from Casino, on the Casino-Tenterfield road. No previous illness.

History of illness.—The first sign suggestive of leprosy was observed about the beginning of 1913; it consisted in blisters, which appeared spontaneously over the left patella; they left scars, still visible. No other signs were noted until a year later, when, about the beginning of 1914, a general eruption began to appear, which slowly increased. It was unaccompanied by any feelings of illness, but his mother, suspecting its nature, sent him to Sydney.

State on admission.—He presents all the usual signs of tuberculous leprosy; there is general swelling and slight distortion of the face; infiltration of the forehead, eyebrows, malar eminences. Point of the chin, and ear-lobes, with a good deal of discolouration.

There is much macula staining of the trunk. In the upper limbs the ulnar nerves are on both sides enlarged and tender; there is some wasting of muscles supplied by them; the hands are cyanosed. Over the lower limbs very extensive maculae exist; over the left knee antenually there is much scarring, together with some infiltration; there is infiltration over the right patellar tendon; there is much bronzing of both these regions, and on the left side macular discolourations. Both peroneal nerves are enlarged, and that on the left side is hypersensitive. No deformities. On the face, upper arms, and elsewhere are very numerous small tuberosities. The B. Leprae was found abundantly in lymph taken from the right ear-lobe and left eyebrow, and in both nares.

Treatment.—Chaulmoogra oil, 45 to 90 m. daily, taken regularly throughout the year.

CASE CXXXVII.—E.W., m., æt. 50; admitted 17th November, 1914.

History.—Born in Banks Island, New Hebrides. Landed in Brisbane, Queensland, 35 years ago, and lived in the immediate neighbourhood till 1892, when he came to Sydney. He was employed as general useful on the North Sydney line for eight years. In 1900 he went to the Tweed River, and was employed there in the canefields until the present time.

History of illness.—The first signs of the disease appeared in August, 1914; they consisted in nodules developing in the skin of the face and in weakness of the hands. Epistaxis and nasal obstruction more recently.

State on admission.—General height, 5 ft. 7½ in.; weight, 8 st. 11 lb.

Head.—Hair of eyebrows almost completely fallen; eyelashes sparse. On the face there are very numerous brownish red tuberosities, varying from the size of a pin's head to that of a small marble. Several small ulcers on buccal mucous membrane and one on the right side of the tongue.

Upper limbs.—Left shoulder has a small area of infiltration. Hands and forearms are slightly swollen and discoloured. There are a few scattered cutaneous tuberosities, and on the outer aspect of left elbow an area of flat infiltration; early characteristic deformity of both hands.

Ulnar nerves are slightly and symmetrically enlarged, and are also slightly hypersensitive. He suffers from neuralgic pains of the forearms.

Trunk.—There is a small tuberosity above and internal to the left nipple, and one on the back to the left of middle line.

Lymphatic glands.—Inguinal glands enlarged.

Lower limbs.—Thighs: A few small cutaneous tuberosities; there are also several over the patellæ.

Feet swollen and cyanised. Some muscular discolouration of skin, which is dry and scaly, and carries a few tuberosities.

External popliteal nerves are slightly enlarged.

Sensation

Sensation (pin prick) of hands and feet definitely impaired.

Treatment.—Chaulmoogra oil, 45 to 90 minims daily. On the 1st of December he began to take Pil. strychnine, gr.  $\frac{1}{60}$  twice daily.

## II.—DEATH.

CASE LXXXVI.—W.M., m., Kanaka; born about 1867; died 14th March, 1914.

Lepra tuberosa.—Admitted 3rd November, 1903.

This year his health, which had declined steadily during 1913, became rapidly worse.

In February necrosis of second toe of right foot developed and the first two phalanges were removed.

The following note was made on 10th March :—Very thin and miserable. Diarrhœa (recurrent since late in 1913) for some days. Taking food badly; is over 14 lbs. lighter than twelve months ago.

Notes made at *post mortem* examination, 14th March, 1914.—Thorax, old adhesions on left side, along posterior surface of lung. Posterior part of lower lobe solid; right lung normal.

Heart.—*Ante mortem* clot on right verticle, muscle pale. No valvular lesion.

Adbomen.—Very little omental fat. Adhesions between under surface of liver and first part of duodenum. Adhesions between upper part of ascending colon and commencement of transverse colon, causing some kinking of hepatic flexure.

Appearance of ulceration along the transverse and descending limbs of colon, showing as dark almost hæmorrhagic areas beneath the serous coat.

Veriform appendix.—Terminal third thickened and seemed shut off by construction of mucre, probably a lepromatous change.

Mesenteric glands.—A few of these glands slightly enlarged.

Small intestine.—Apparently normal to within 4-5 feet of ileo-cæcal junction. Then it showed enlargement of many follicles, though Peyers patches were apparently normal. The last 2 feet were a good deal thickened, with scattered areas of necrosis.

Large intestine.—Walls much thickened. Active congestion of mucous membrane of upper portion, giving place to marked ulceration lower down. Ulceration did not extend quite to serous membrane, and it was irregular in its mode of spread.

Spleen enlarged; capsule slightly thickened, consistency normal.

Kidneys, pale, small; capsule slightly thickened and leave a finely granular surface. On section cortex pale and diminished in each case.

Liver enlarged and somewhat pale. Pancreas appears normal.

Nerves.—Both ulnar nerves thickened about the elbow joints; testicles, right, including epididymus, is nodular.

Left looks normal, but the epididymus is affected.

Tongue, larnyx and œsophagus. Nothing noteworthy.

## EXAMINATION OF TISSUES, PRESERVED IN FORMALIN, SUBMITTED TO THE MICROBIOLOGICAL LABORATORY, DEPARTMENT OF PUBLIC HEALTH.

(J. B. CLELAND AND E. W. FERGUSON.)

Lung (portion).—Macroscopically shows extensive whitish areas apparently of consolidation. Perivascular lymphatics pigmented.

Microscopic section.—Extensive areas of caseation surrounded by giant cells, the arrangement suggesting tuberculosis. No acid-fast organisms seen.

Liver (portion).—Macroscopically, pale, slightly mottled with paler areas.

Microscopic sections.—The capillaries between the liver cells are dilated. There is a slight increase of fibrous tissue between the hepatic cells. A few scattered acid-fast bacilli occasionally seen in the walls of the portal vessels.

Spleen (portion).—Macroscopically, firm and hard. Capsule wrinkled.

Microscopic sections.—Capsule thick and fibrous. Pulp replaced by a fibrosed stroma with scattered lymphocytes. Scattered acid-fast bacilli present.

Kidney.—Macroscopically, very pale, fatty-looking, soft and friable.

Microscopic sections.—Fine interstitial fibrosis. The cells of the tubules are rather granular and indistinct with poorly staining nuclei. No acid-fast bacilli seen.

Testicles.—Macroscopically, nil definite.

Microscopic sections.—The tubules in parts are quite replaced by a cellular stroma, the tubular area being composed of denser less nucleated fibrous tissue, gradually occluding the lumen. In other parts, this was incomplete, leaving a fibrous wall with the lining epithelium being shed into the remains of the lumen. The intertubular connective tissue was the more cellular. Acid fast bacilli scattered, and in masses.

Nerve (locality not stated).—Macroscopically, apparently thickened.

Microscopic sections.—Wavy strands of fibrous tissue, with scattered cells, replacing apparently all the nerve fibres. Acid-fast bacilli present, scattered and in masses.

Sciatic nerve.—Macroscopically, apparently somewhat thickened.

Microscopic sections.—Longitudinal and transverse, show fibrosis with some round cell infiltration between the individual fibres. Most of the nerve fibres were degenerated. The fibrous tissue between the nerve bundles was not apparently affected, but acid-fast bacilli were present in the walls of the larger accompanying veins and arterics.



### III.—PROGRESS REPORT on cases remaining on 31st December, 1914 (not including those admitted during 1914).

CASE XVII.—C.T., m., Javanese; born about 1862; admitted 14th August, 1886.  
*Lepra Nervorum*.—Condition unaltered. No active signs.

CASE LXXXII.—F.C., m., Fijian native, but of European descent; born 1836; admitted 7th April, 1903.

General health has been fairly good. Towards the end of 1913 an ulcer developed on the sole of the left foot, and it was noted on the 21st July, 1914, that this ulcer was quite healed.

Treatment.—Chaulmoorga oil was taken during the year, with intermissions, amounting to five months, about 45 minims daily. Pil. strychnine, gr.  $\frac{1}{60}$  twice daily was also taken, and intermitted at the same intervals.

CASE LXXXVII.—F.E.B., m., born in N.S.W. in 1876; admitted 25th November, 1903. Survey, 27th February, 1914.

Head and neck.—Hair has become grey and has receded from forehead.

Face.—Both eyebrows somewhat infiltrated, right more than the left; hair not deficient. Upper lip slightly infiltrated, as also skin in region of angle of lower jaw; both sides right ear-lobe doubtful infiltration.

Cervical and facial nerves not palpable.

Trunk.—Brown staining on lower dorsal spines. Right orchitis two weeks.

Upper limbs, right.—Nodule and discolouration on back of upper arm.

Ulnar nerve about normal in size, but tender; correct reference. Median nerve in front of elbow enlarged, not tender, correct reference. Elbow tip voluminous.

Forearm.—Sensibility impaired more on flexor and ulnar surfaces than on extensor and radial. Progressively less from elbow downwards. In hands a light touch cannot be felt except down radial border of thumb. Says that sensibility varies; worse in cold weather. Slight discolouration along ulnar side of forearm. Trophic changes very marked in hand, characteristic of ulnar paralysis. Middle finger has lost most of terminal phalanx.

Left upper limb.—Ulnar nerve much enlarged, not tender, correct reference. Median enlarged at elbow, correct reference. Sensibility lost in hand and fingers, except radial side of thumb and radial half of back of hand. Much atrophy of hand. Some loss of bone from terminal phalanx of middle finger.

Lower limbs.—Right, faint discolouration over crest of ilium. Fading infiltration of gluteal region. Many nodules on inner surface of thigh. Same area is also discoloured. Small nodules on calf. Foot somewhat cyanosed. Peroneal nerve thickened, not tender. Left, much the same as right; nodules on inner aspect of thigh are more marked than on left side. Many small nodules on calf. Foot somewhat cyanosed.

Peroneal nerve same as right.

Bacilli *Leprae*.—Right naris, no bacilli found.

Left naris, no bacilli found.

Nodule (left calf), bacilli.

Nodule (left calf), bacilli numerous, discrete, fragmented staining.

Treatment.—Ol. Chaulmoogra, 45 minims daily, fairly regularly during first six months of the year; thereafter discontinued.

CASE LXXXVIII.—G.M.S., f., N.S.W.; born 1835; admitted 9th February, 1904.

The disease continued to make headway during the year. In March she began to suffer from pain and swelling of joints, which persisted for several months, but moderated towards the end of the year. Other swellings not associated with joints, chiefly of legs and feet, developed and resulted in several instances in open sores. Vision of both eyes, which was rapidly failing at the beginning of the year, became steadily worse, so that in September she was only able to discern light.

Treatment.—The eyes were treated actively with the advice of the honorary ophthalmic surgeon, but the patient refused all general treatment.

CASE LXXXVIX.—V.M.W., f., N.S.W.; born 1836; admitted 31st March, 1904.

The improvement noted in last report has continued uninterruptedly, except for some pain and swelling of hands and pain in knees in the early months of the year. This cleared up completely, and towards the end of the year she was practically free from active signs.

No treatment.

CASE CI.—T.A., m., native of Ambrym Island; born about 1870; admitted 11th July, 1905.

No noticeable change during 1914. The general health remained good, and the weight about 12 stone.

Declined all medicine until November, when he began to take gynocardate of magnesium, gr. xx three times daily.



CASE CIII.—H.G., m., native of Gala Island; born about 1870; admitted 14th November, 1905.

In April the left big toe became gangrenous, and the terminal phalanx was removed. 31st December—Appears quite insane. Disposition altered; preoccupied expression. States that he intends to leave the institution, and also threatens to commit suicide. He has been acting strangely for several days.

CASE CXIII.—C.S.C., f., Victoria; born about 1867; admitted 16th April, 1907.

Condition unaltered. No active signs; general health good. No treatment.

CASE CXIX.—Ah Jack, m., Chinese; born about 1867; admitted 17th September, 1907.

Remains the same in general condition. Has no converse with the other inmates; lies in bed most of the day, only occasionally getting up.

An ulcer of the foot healed in March. In August the second toe of left foot became necrosed.

Refused all treatment.

CASE CXVII.—A.R., f., N.S.W.; born 1900; admitted 14th January, 1903.

*Lepra tuberosa*.—Numerous small pustules appeared on legs and feet early in the year, fresh lesions continuing to occur for several weeks. In many instances these pustules became confluent, and the resulting ulcers persisted for months. About the same time she suffered from rheumatic pains in various joints, especially in the hands and feet. These pains continued more or less throughout the year.

In June and July she had several attacks of angina pectoris—precordial pain and distress characteristic of that ailment.

From August till the end of the year she suffered from conjunctivitis of both eyes, together with slight inflammation of the deeper structures.

Treatment.—Gynocardate of magnesia 15 to 30 grains daily, from September onwards. She also took cod liver oil and extract of malt.

CASE CXXIII.—J.C., m., English; born about 1862; admitted 15th November, 1910.

States that his eyesight has improved slightly; otherwise no alteration. No active signs.

Treatment.—Chaulmoogra oil 15 to 13 minims daily, almost continually throughout the year. Pil. stychnine gr.  $\frac{1}{60}$  twice daily, at intervals.

CASE CXXIV.—J.A., m., Syrian; born about 1875; admitted 29th November, 1910.

In February he passed several feet of tapeworm, and was treated in the usual way with malefern. In April he complained of "numbness" of legs and feet, varied by "pins and needles" sensation. Weight increased from 8 to 10 stone.

Treatment.—Chaulmoogra oil, 45 to 135 drops daily, at intervals, amounting in all to three months. This was varied by tonic treatment, viz., Easton's syrup and extract of malt.

CASE CXXV.—C.M., m., Tongan; born about 1866; admitted 8th June, 1911.

*Lepra tuberosa*.—No alteration; no active signs.

Treatment.—Chaulmoogra oil, 45 drops daily, and Pil. strychnine gr.  $\frac{1}{60}$  twice daily from the beginning of the year till 20th March, when all treatment was discontinued.

CASE CXXVII.—M.B., f., Irish; born 1877; admitted 14th November, 1911.

*Lepra tuberosa* of severe type.

Going rapidly downhill; very feeble; dyspnoea on least exertion. Sight failing, unable to read from beginning of the year. Fresh lesions (lepromata) appeared on the face, upper limbs, and legs from time to time during the year.

Treatment.—Chaulmoogra oil, m. 30, intermittently during the year.

Symptomatic treatment as occasion required.

CASE CXXVIII.—Sue Chung, m., æt. 41; admitted 21st May, 1912.

*Lepra tuberosa et nervorum*. Getting gradually worse. In bed most of the time.

2nd February, 1914.—Acute pain and tenderness in both feet and legs. Acutely tender nodule on inner side of right elbow just above condyle. Temperature raised for past four days.

9th February.—Running a high temperature. Much pain and tenderness in both forearms and in left calf. Left calf is shrunken, and in it can be felt a very tender mass.

24th February.—Still ill, and acute pains in forearm. Sleeps very little in spite of hypnotics.

6th April.—Is still subject to eruptions of painful nodules, which last a week or so.

4th May.—Still has much pain from nodules, especially in lower limbs.

2nd June.—Still about the same. Some nodules suppurating.

21st July.—Much improved. Soles are still painful and tender.

From

From this date onwards his condition remained about the same, nodules continuing to develop at short intervals, with pain and tenderness in the extremities.

Treatment.—Chaulmoogra oil, 45 to 135 drops daily, and Pil. Strychn., gr.  $\frac{1}{60}$ , one to three daily, taken very irregularly. In the intervals tonic and symptomatic treatment.

CASE CXXIX., L.J.T., m., æt. 15; admitted 14th August, 1912.

Survey, 21st February, 1914.

Head and neck.—No obvious lesions, except perhaps some nodosity of both earlobes, and doubtful thickening of alae nasi and point of nose. No epistaxis nor nasal obstruction.

Left tonsil is much enlarged, and the surface bears a chronic ulcer.

Upper limbs.—Right ulnar nerve normal; some slight discolouration along ulnar side of forearm, and a small nodule (?) on ulnar side of wrist. Hand is slightly cyanosed, but no atrophy.

Left.—Ulnar nerve enlarged, and slightly tender above notch; reference is correct. Several areas of slight discolouration along ulnar aspect of forearm, and definite small nodule on inner aspect of wrist. Hand slightly cyanosed; no atrophy.

Trunk.—Nil.

Lower limbs.—Right.—Large circular macula, four inches in diameter, on buttock, just below crest of ilium; lower part of the circle is infiltrated. Over gluteal region, and down the thigh much discolouration, with infiltrated patches here and there, well marked on both anterior and posterior surfaces. On inner aspect of lower third a deeply discoloured area, 3 inches by 1 inch, infiltrated and slightly raised above surrounding surface. Ext. popliteal nerve slightly enlarged and tender. Correct reference. Leg and foot cyanosed.

Left.—Faint macule, 3 inches by  $1\frac{1}{2}$  inches, just below crest of ilium. Much discolouration and some infiltration over gluteus maximus and just below gluteal fold. Discolouration of thigh not so marked as in right. There are a few nodular areas. Ext. popliteal nerve same as right. Leg and foot cyanosed.

Smears.—Right ear-lobe, B. Leprae—scanty.

Left ear-lobe, B. Leprae—scanty.

Right naris—no bacilli found, many bacteria.

Left naris—no bacilli found, no bacteria.

Nodule, inner side right wrist—B. Leprae fairly numerous, fragmented.

Nodule, inner side left wrist—B. Leprae fairly numerous, fragmented.

Macule on right ilium—B. Leprae scanty, fragmented.

Infiltration over inner aspect of right thigh—no B. Leprae found.

Treatment.—Chaulmoogra oil, 45 to 135 drops daily, and Pil. Strychninæ gr.  $\frac{1}{60}$  once daily, fairly regularly throughout the year.

CASE CXXX.—S.M., m., æt. 51; admitted 27th August, 1912.

General health good. Suffers occasionally from rheumatic pains and swelling of joints, but otherwise no active symptoms.

Treatment.—Chaulmoogra oil, 45 to 135 drops daily.

CASE CXXXI.—J.F., m., æt. 28; admitted 19th September, 1912.

March 3rd—survey :—

Head and neck.—Face generally is cyanosed. Nodules on forehead; large nodule of left eyebrow; nodules of cheeks, both earlobes and chin. Hair of scalp is thick, if eyebrows deficient. Fauces clear.

Superficial cervical nerve branches can be felt enlarged on either side.

Trunk.—Faint macule interval to and below right nipple. Has lost about 3 stone since 2nd February.

Upper limbs.—Right.—Brown discolouration of back of upper arm.

Ulnar and median nerves much enlarged, hard and nodular; ulnar traceable easily to axilla. Reference correct.

Forearm.—General discolouration. Near olecranon is a circular patch, size of florin, pale centre, dark and slightly raised margin. Just above styloid process of ulnar another discoloured patch, whose appearance suggests a nodule that has subsided.

Scattered on the forearm (right) are several small erythematous nodules, not much bigger than mosquito-bites. These were painful, but are now subsiding. Hand is cyanosed and somewhat wasted. Fingers straight, except little finger, which is slightly crooked. Sensibility (tactile) not appreciably impaired.

Left.—Much the same as right, but much more marked changes. Ulnar and median nerves enlarged. Ulnar traceable to axilla. Median nerve traceable to middle of forearm, and very tender.

Hand deformed and atrophied. Anæsthesia of little finger and ulnar side of ring finger. Many small red nodules of forearm. These have been very painful lately, but pain is now much better.

Lower limbs.—Maculæ of both buttocks and thighs. Ext. popliteal nerves enlarged and hard. Both legs are much discoloured, especially left; along shin numerous small cutaneous nodules.

Feet are cyanosed. On left foot dorsum bears several small nodules.

Bacilli:

Bacilli.—Left naris—B. Leprae numerous, clumped and single fragmented staining.

Right naris—B. Leprae abundant in masses.

Nodule left eyebrow—B. Leprae numerous, clumped and single.

Nodule right forearm—B. Leprae numerous, clumped and single.

5th April, 1914.—For some days exacerbation of neuritis in right arm, causing much pain along the course of the ulnar nerve. Yesterday a tubercle which had rapidly formed on the left eyebrow broke and discharged. This morning the left eye is closed by oedema of lids.

24th April.—Considerably improved. Eye now clear again.

26th May.—More pain in left arm, with several fresh nodules.

5th June.—Left arm still painful.

21st July.—Considerably improved; gets up most days.

Nothing further noteworthy during the year.

Treatment.—Chaulmoogra oil, 30 to 90 m. daily; with Pil. Strych. gr.  $\frac{1}{16}$  twice daily, fairly regularly.

CASE CXXXII.—W.D., m., aboriginal native of New South Wales; æt. 23; admitted 9th June, 1913.

9th February, 1914.—Face has now healed, and has no dressing on it. The general effect is that left eyebrow is about normal size, but left side of face is bigger than right; mouth is drawn to the right, and left orbicularis palepebrarum does not close the left eye.

26th May.—Considerably improved.

Improvement maintained onwards. Weight increased from 8 to 8½ stone.

Treatment.—Chaulmoogra oil, 45 drops daily, with Pil. Strychninæ gr.  $\frac{1}{16}$  twice daily, regularly till 1st December.

CASE CXXXIII.—J.M., m., native of Palmer Island, New Hebrides; æt. about 60; admitted 23rd November, 1913.

General health good. Weight increased from 9st. 4lb. to 10st. 1lb.

Steadily improving.

Treatment.—Chaulmoogra oil, 45 m. daily till 1st December.

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### 3.—DAVID BERRY HOSPITAL.

To the Director-General of Public Health.

Sir,

I have the honor to present herewith my Annual Report of the work of this institution for the twelve months ended 31st December, 1914.

#### STAFF.

Medical officer	...	...	...	...	K. GOERGS, M.B., Ch.M.
Matron	...	...	...	...	F. M. PERKINS.
Secretary	...	...	...	...	H. BRUCE.

*Patients treated.*—Patients to the number of 233 were treated during the year, which shows a decrease of 33 in comparison with the previous year (1913). A slack period of three months (July, August and September) accounts for the falling off of admissions, otherwise the work has been heavy owing to the serious nature of many of the cases.

The following is a summary of the principal statistics :—

	Males.	Females.	Total.
Patients remaining in Hospital, 31st December, 1913	10	7	17
Patients admitted and registered during 1914	129	87	216
Total under treatment	139	94	233

The result of the total number is as under :—

#### Discharges—

Recovered	...	...	...	...	...	...	...	171
Relieved	...	...	...	...	...	...	...	16
Unrelieved	...	...	...	...	...	...	...	5
Died	...	...	...	...	...	...	...	24

Leaving under treatment 31st December, 1914	...	...	...	17
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Total ... 233

The average daily number of patients resident was 15·47—Males, 8·08; Females, 7·39.

The mortality rate was 10·3, which is the highest for this institution for any year.

Of the total deaths which occurred in the hospital, 15 were admitted moribund. All accident and urgent cases were admitted during the year without delay.

The number of paying patients who contributed something towards their maintenance while in the hospital was 57, and the total amount received from contributing patients during the twelve months was £195 10s. 2d., compared with £165 9s. 3d. in 1913.

The average duration of the stay of patients was 24·24 days.

*Operations.*—The operations for the year totalled 56, as compared with 78 in 1913. Dr. Ewing, of Nowra, assisting on 21 occasions, and the late Dr. Hill on 1. Post-operative deaths, 2—both practically moribund on admission.

*Infectious Cases.*—The work of the nursing staff has been heavier than usual owing to the number of the infectious cases treated. The isolation wards being occupied for ten months out of the twelve. The following cases were treated :—

Measles, 1; diphtheria, 4; scarlet fever, 7; enteric, 6; erysipelas, 2; total, 20.

*Additions and Improvements.*—No additions have been made to the buildings during the period under review, and the principal improvements were the erection of a windmill as an auxiliary water supply, at a cost of £110, and the connection of this new water supply with the irrigation paddock, at a cost of £4 11s. 6d.; other items of expenditure being the fencing of the irrigation paddock with rabbit-proof netting for the sum of £14, and the erection of a new dividing fence between the laundry and stables for £8 15s., making a total of about £137.

*Repairs.*—The only large item of expenditure under this heading was for £45 for painting the halls and two rooms in the main building, and painting and papering the interior of the nurses' lodge. All the buildings are now in a fairly good condition, but the exterior woodwork of same will require painting at an early date.

*Expenditure.*—The expenditure for the year as per bank passbook was £1,791 5s. 7d. as compared with £2,214 19s. 1d., showing a decrease of £423 13s. 6d.

General

*General.*—The grounds immediately surrounding the hospital are much improved, but the portion on the eastern boundary badly needs brushing and clearing.

A good supply of vegetables has been obtained from the irrigation paddock since the erection of the rabbit-proof netting, and splendid results secured from the poultry yard, no eggs having been purchased during 1914. The yard, however, is too small and requires enlarging. Both horses are in work and in good condition, but the sulky used by the nurses is almost beyond repair and should be replaced without delay.

*Staff.*—No alterations have been made in the nursing staff during the last year. The work of the institution has been carried out most harmoniously, and the good relationship between the nursing staff and the medical officer has rendered the work one of great satisfaction. No complaints have been received from the patients or relatives.

Detail tables are appended, showing the number of persons under treatment, nature of disease, &c.

RETURN of the number of persons under treatment, the order of disease for which they were treated, and the number of deaths in each order during the year 1914.

	Discharged during the year.				Remaining in on 31st December, 1914.	Total.
	Cured.	Relieved.	Un- relieved.	Died.		
GENERAL DISEASES.						
Typhoid Fever .....	5	...	...	1	...	6
Measles .....	1	...	...	...	...	1
Scarlet Fever .....	7	...	...	...	...	7
Diphtheria.....	4	...	...	...	...	4
Influenza .....	3	...	...	...	1	4
Erysipelas .....	2	...	...	...	...	2
Tuberculosis (Lung) .....	1	1	...	...	...	2
Syphilis (Tertiary) .....	1	...	...	...	...	1
Cancer (Superficial) .....	...	...	...	...	...	...
Acute Rheumatism .....	14	1	...	1	...	16
Chronic Rheumatism .....	...	1	...	...	...	1
Diabetes .....	...	...	...	1	...	1
Anæmia (Chlorosis) .....	2	...	...	...	...	2
Alcoholism .....	2	1	...	...	...	3
Other General Diseases.....	...	...	...	...	...	...
	42	4	...	3	1	50

#### DISEASES OF THE NERVOUS SYSTEM.

Hæmorrhage of Brain .....	2	...	1	1	...	4
Other forms of Mental Alienation .....	...	...	3	...	...	3
Epilepsy .....	...	1	...	...	...	1
Chorea .....	4	2	...	...	...	6
Neuritis .....	2	2	...	...	2	6
	8	5	4	1	2	20

#### DISEASES OF THE CIRCULATORY SYSTEM.

Acute Endocarditis .....	1	3	...	1	...	5
Organic Disease of Heart .....	...	...	...	1	...	1
Diseases of the Veins .....	...	...	...	...	...	...
	1	3	...	2	...	6

#### PUERPERAL CONDITIONS.

Accidents of Pregnancy .....	3	...	...	...	...	3
Puerperal Septicæmia .....	...	...	...	1	...	1
Puerperal Diseases of Breast .....	1	...	...	...	...	1
	4	...	...	1	...	5

#### DISEASES OF THE RESPIRATORY SYSTEM.

Disease of Nasal Fossæ .....	5	...	...	...	1	6
Acute Bronchitis .....	8	...	1	3	...	12
Chronic Bronchitis .....	...	...	...	...	...	...
Broncho-Pneumonia .....	1	...	...	...	...	1
Pneumonia .....	1	...	...	...	...	1
Pleurisy .....	...	...	...	...	1	1
Asthma .....	...	...	...	...	1	1
	15	...	1	3	3	22

Return of the Number of Persons under Treatment, &c.—*continued.*

	Discharged during the year.				Remaining in on 31st December, 1914.	Total.
	Cured.	Relieved.	Un- relieved.	Died.		
DISEASES OF THE DIGESTIVE SYSTEM.						
Diseases of the Pharynx .....	4	...	...	...	...	4
Diseases of the Stomach (Cancer excluded) ...	3	1	...	...	...	4
Diarrhœa and Enteritis (children under 2 years) .....	1	...	...	4	...	5
Diarrhœa and Enteritis (children over 2 years and adults) .....	2	...	...	2	1	5
Intestinal Obstruction .....	...	...	...	1	...	1
Diseases of Anus and Fœcal Fistulæ .....	6	...	...	...	...	6
Jaundice .....	1	...	...	...	...	1
Appendicitis .....	8	1	...	...	...	9
	25	2	...	7	1	35

## DISEASES OF THE GENITO-URINARY SYSTEM.

Acute Nephritis .....	1	...	...	2	...	3
Bright's Disease .....	...	...	...	...	1	1
Diseases of Bladder .....	4	...	...	2	1	7
Non-Venereal Diseases of the Male Genital Organs. ....	2	...	...	...	...	2
Diseases of the Uterus .....	7	...	...	1	1	9
Ovarian Tumors .....	...	...	...	...	1	1
Other Diseases of the Female Genital Organs ...	1	...	...	...	1	2
	15	...	...	5	5	25

## DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE.

Carbuncle .....	2	...	...	...	...	2
Acute Abscess .....	3	...	...	...	...	3
Other Diseases of the Skin .....	17	1	...	...	2	20
Scabies .....	2	...	...	...	...	2
	24	1	...	...	2	27

## OLD AGE.

Senility .....	...	...	...	1	...	1
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## VIOLENCE.

Sprains .....	2	...	...	...	...	2
Other Accidental Injuries .....	14	...	...	1	3	18
Acute Poison .....	1	...	...	...	...	1
Snake-bite .....	1	...	...	...	...	1
Cutting Instruments .....	3	...	...	...	...	3
	21	...	...	1	3	25
Unspecified or Ill-defined causes .....	7	1	...	...	...	8
No Disease .....	9	...	...	...	...	9
	16	1	...	...	...	17

## SUMMARY.

Total Cases—General .....	42	4	...	3	1	50
Diseases of the Nervous System .....	8	5	4	1	2	20
Diseases of the Circulatory System .....	1	3	...	2	...	6
Puerperal Conditions .....	4	...	...	1	...	5
Diseases of the Respiratory System .....	15	...	1	3	3	22
Diseases of the Digestive Organs .....	25	2	...	7	1	35
Diseases of the Genito-Urinary System .....	15	...	...	5	5	25
Diseases of the Skin and of the Cellular Tissue .....	24	1	...	...	2	27
Old Age .....	...	...	...	1	...	1
Violence .....	21	...	...	1	3	25
Ill-defined Diseases .....	16	1	...	...	...	17
	171	16	5	24	17	233



OPERATIONS performed during 1914 :—

	Recovered.		Died.		Total.
	Males.	Females.	Males.	Females.	
I.—Alimentary System.					
Appendicectomy.....	3	2	.....	.....	5
Laparotomy exploratory .....	.....	1	.....	.....	1
"    intestinal obstruction.....	.....	.....	1	.....	1
Hæmorrhoids .....	2	.....	.....	.....	2
Fistula in Ano .....	1	1	.....	.....	2
Ischio-rectal abscess .....	1	.....	.....	.....	1
	7	4	1	.....	12
II.—Genito-Urinary System.					
Circumcision .....	4	.....	.....	.....	4
III.—Cellular and Cutaneous System.					
Removal of sebaceous cyst .....	2	.....	.....	.....	2
Plastic operation on finger .....	1	.....	.....	.....	1
Incisions .....	4	3	.....	.....	7
Exision lipoma .....	.....	2	.....	.....	2
Removal splinter .....	1	1	.....	.....	2
Suturing tendon .....	2	.....	.....	.....	2
Removal of toe-nails.....	.....	3	.....	.....	3
	10	9	.....	.....	19
IV.—Reproductive System.					
Vaginal cœliotomy .....	.....	1	.....	.....	1
Salpingo-Oophorectomy .....	.....	1	.....	.....	1
Oophorectomy .....	.....	.....	.....	1	1
Laparotomy for ectopic gestation .....	.....	1	.....	.....	1
Curettage .....	.....	5	.....	.....	5
	.....	8	.....	1	9
V.—Osseous and Arthritic System.					
Amputation of finger .....	1	.....	.....	.....	1
Opening knee-joint .....	.....	.....	.....	.....	.....
Reducing fracture .....	1	.....	.....	.....	1
Teeth extraction.....	1	1	.....	.....	2
Osteotomy .....	.....	.....	.....	.....	.....
	3	1	.....	.....	4
VI.—Respiratory System.					
Adenoids and tonsils removed.....	1	2	.....	.....	3
Adenoids, removal .....	2	2	.....	.....	4
	3	4	.....	.....	7
VII.—Lymphatic System.					
Removal of glands of axilla.....	1	.....	.....	.....	1
SUMMARY.					
I. Alimentary System .....	7	4	1	.....	12
II. Genito-Urinary System .....	4	.....	.....	.....	4
III. Cellular and Cutaneous System .....	10	9	.....	.....	19
IV. Reproductive System .....	.....	8	.....	1	9
V. Osseous and Arthritic System .....	3	1	.....	.....	4
VI. Respiratory System .....	3	4	.....	.....	7
VII. Lymphatic System .....	1	.....	.....	.....	1
	28	26	1	1	56
	Discharged during the year.				Total.
	Cured.	Relieved.	Un-relieved.	Died.	
Infectious Diseases.					
Scarlet Fever .....	7	.....	.....	.....	7
Enteric Fever .....	5	.....	.....	1	6
Measles .....	1	.....	.....	.....	1
Erysipelas .....	2	.....	.....	.....	2
Diphtheria .....	4	.....	.....	.....	4
	19	.....	.....	1	20

*Anæsthetics used.*

Ether ... ..	34
Chloroform and ether ... ..	3
Chloroform ... ..	9
Kelene ... ..	1
Quinine and urea hydrochloride ... ..	9
Total ... ..	56

Antitoxin was administered in 6 cases.

Antitoxin.	Cases.
2,000 units ... ..	2 (protective doses received).
8,000 „ ... ..	1
16,000 „ ... ..	1
20,000 „ ... ..	1
24,000 „ ... ..	1
	6

Number of deaths subsequent to operations in 1914, 1 case (admitted moribund).

## SUMMARY.

	1913.	1914.
Number of patients treated ... ..	266	233
„ „ admitted ... ..	252	216
„ operations ... ..	78	56
„ deaths post-operative ... ..	3	1
„ deaths from other causes ... ..	8	23

The increase in the number of deaths during 1914 is accounted for by the increased number of patients admitted in a moribund state.

H. BRUCE,  
Secretary.

## 4. LADY EDELINE HOSPITAL FOR BABIES.

## "GREYCLIFFE," VAUCLUSE

*Board of Directors.*

President : Mrs. F. FLOWERS.

Vice-Presidents : Mrs. W. A. HOLMAN,  
Mrs. D. R. HALL.

Hon. Treasurer : Mrs. C. CARMICHAEL.

Hon. Secretary Ladies' Committee : Mrs. M. B. MERGENTHEIM.

Directors :

Mrs. G. BLACK,	Mrs. A. JAMES,
Mrs. W. G. BOORMAN,	Mrs. V. LUDLOW,
Mrs. J. J. CARROLL,	Mrs. H. L. MAITLAND,
Mrs. K. DWYER,	Mrs. H. O. ROGERS,
Miss A. GOLDING,	LADY ALLEN TAYLOR,
Mrs. IRELAND,	Mrs. J. L. TREFLÉ,
	Mrs. W. P. WALTON.

Chairman : Dr. ROBERT T. PATON.

Vice-Chairman : Mr. A. W. GREEN.

*Honorary Medical Officers.*

Visiting Medical Officers :

Dr. C. W. REID,	Dr. L. R. PARKER,
	Dr. H. C. ADAMS.

Consulting Physician : Dr. STORIE DIXSON.

Consulting Surgeon : Dr. CHARLES MACLAURIN.

Hon. Secretary : Mr. T. H. NEELY.

Matron : Miss H. J. TURNER.

I HAVE the honor to submit the first Annual Report of the Lady Edeline Hospital for Babies, "Greycliffe," Vauclose.

The Hospital owes its existence to the Honorable Frederick Flowers, who, at the time of its inception, was performing the Ministerial duties pertaining to Public Health. Mr. Flowers saw that an opportunity existed for converting one of the recently resumed premises into a Hospital for Babies, and immediately put the idea into action. Such an institution was badly needed, and the wisdom of the step taken has been amply demonstrated, as the Hospital has proved a boon to many mothers who would otherwise have been at a loss to know where to have their sick infants treated.

The Directors holding office at present are :—

Mrs. G. Black,	Mrs. Ireland,
Mrs. W. G. Boorman,	Mrs. A. James,
Mrs. J. J. Carroll,	Mrs. V. Ludlow,
Mrs. C. Carmichael,	Mrs. H. L. Maitland,
Mrs. K. Dwyer,	Mrs. M. B. Mergentheim,
Mrs. F. Flowers,	Lady Allen Taylor,
Miss A. Golding,	Mrs. J. L. Treflé,
Mrs. D. R. Hall,	Mrs. W. P. Walton,
Mrs. W. A. Holman,	Dr. R. T. Paton,
	Mr. A. W. Green.

Of the original Committee appointed to control this Hospital, the following have resigned :—Mrs. A. N. Barnett, Mrs. N. Wessburg, Mrs. J. S. T. McGowen, Mrs. L. Williams, Mrs. O. C. Beale, Mrs. Lester, Miss M. Harris. Mesdames Rogers, Maitland, and Ludlow have been appointed to fill vacancies.

The ladies of the Committee are most enthusiastic in regard to everything connected with the Hospital, and take a keen interest in the welfare of helpless little ones under their care. The regular monthly meetings are well attended, and in addition to these the ladies hold informal meetings each month for the purpose of discussing matters and arranging business for the regular meetings. Two members are appointed each month as a Visiting Committee, whose duty it is to pay special visits to the hospital and report on any matters needing attention. It is evident, therefore, that the Committee give up a considerable amount of time to this commendable work.

As this is the first Report, it would not be out of place to make reference to the historic spot in which, owing to the beneficence of the State, the little sufferers are now located.

Some four or five years ago the Foreshores Vigilance Committee drew attention to the fact that practically all the foreshores of the harbour were in the hands of private persons, and the Wentworth Estate, on which "Greycliffe" stands, was mentioned as one that should again become the property of the Crown. Pressing representations were made to the Government, and the property was acquired in 1912.

The building now used for hospital purposes was erected about seventy years ago, and was originally the home of Mr. Fitzwilliam Wentworth. It has a north-easterly aspect



aspect, and is situated a few hundred yards from the waters of Port Jackson, commanding a view which is, perhaps, unexcelled in any part of the world, while the highlands at the back afford it protection from the southerly and westerly winds. Its position may, therefore, be described as an ideal one for the purpose for which it is now being used.

The Hospital was opened by the Premier, the Honourable W. A. Holman, on 19th November, 1913.

The treatment of infants under 2 years of age suffering from gastro-enteritis is the main object of this institution, and to ascertain how well that object has been accomplished during its short existence a reference to the figures in the Matron's Report, attached, is all that is necessary.

There are, at present, four wards, with accommodation for over thirty cots, but as the work increases it is hoped that certain structural alterations will be effected, and that room will be found for at least fifty babies.

The staff consists of five honorary medical officers, a matron, three head nurses, and six probationers, and a needlewoman.

Mr. G. H. S. King relinquished his duties as Honorary Secretary to the Hospital on taking up the position of Under Secretary, Department of Public Health; and Mr. T. H. Neely, Secretary to the Director-General of Public Health, took his place from 1st May.

The institution is maintained by the Government, under the Department of Public Health. Any amounts contributed by patients' relatives or friends are placed to the credit of a "Samaritan Fund," and used for the payment of mothers who are employed in light domestic duties at the Hospital.

In addition to this fund the Committee have received a considerable sum as the result of entertainments, arranged by the ladies, and several donations for the purpose of providing extra comforts for the babies. The Directors wish to offer their thanks for the donations received, and to Mrs. Haffenden-Smith, and all those who assisted in giving entertainments.

The first patients were admitted on 3rd December, 1913, and since that date 231 infants have been dealt with. Forty-one deaths have occurred, so it will be seen that, considering the nature of the disease, and the low condition in which some of the babies were when received, the mortality rate has not been high. The daily average number of beds occupied was twenty-eight, and the highest number of patients in the Hospital was during the month of November, 1914, when thirty-four cots were occupied.

The patients remained in hospital for periods ranging from a few days to eight weeks, the average being 29.2 days.

In connection with this work it might be mentioned that, with a view to keeping in touch with former patients, the mothers are encouraged to bring their children to a clinic which has been opened at the Board of Health Offices, Macquarie-street. One of the Honorary Medical Staff and the Matron attend there every Thursday afternoon from 3 to 4 o'clock.

It is recognised that the project has been a success, and that the ladies who thus devote so much of their time to the care of suffering infants are deserving of the thanks—not only of those parents whose little ones have been benefited—but of the community generally.

A word of thanks is also due to the Honorary Medical Staff for the care and attention which they have so generously given the patients entrusted to them.

Various donations in kind have been received during the year, and the Directors desire to offer their thanks to the ladies and gentlemen who generously donated various gifts. Among others the following were received:—Clothing, drying stove, books, blinds for verandahs, morocco-bound Bible, and a small canvas tent.

R. T. PATON,  
Chairman.

#### REPORT BY THE MATRON.

I HAVE the honor to submit the first Annual Report of the Lady Edeline Hospital for Babies, "Greycliffe," Vaucluse.

The staff have had a very busy time during the greater part of the year, and they feel that the little ones restored to health during the short period of the existence of the Hospital is evidence of their devotion to duty, and an ample justification of its establishment.

The treatment does not end on discharge from the Hospital. It is continued at a weekly clinic at the Offices of the Board of Health, where a number of mothers attend regularly with their babies. The results, as shown by the appearance of the babies, are very encouraging, and very few of them now retain any evidence of the severe struggle for existence through which they have passed. The restoration of the health of their children calls forth the grateful thanks of the parents.

Parents should not delay seeking hospital treatment for their babies, as the longer they put it off the more difficult the successful treatment of the case becomes.

The transit of patients from the city suggested difficulties in the beginning, but this, in a measure, has been overcome, as a waggonette and horse to meet them at the Watson's Bay tram has been supplied. Medical men find this arrangement most satisfactory, as on receipt of a telephone message at the Hospital the vehicle is despatched to meet patients.

The main food for the patients—pure milk—is produced at the Hospital, and the cows, belonging to the Institution, are, by permission of the trustees of the Neilsen Park, depastured in the park, which adjoins the Hospital Grounds.

In

In some cases it is necessary for mothers to be admitted to the Institution with their babies, and arrangements have been made for six of them to be in residence at one time. This, of course, has made the expenses heavier than they otherwise would have been.

Six pupil nurses will shortly complete their training in baby nursing. They have received lectures from the Honorary Physicians and the Matron, and will sit for examination about the end of the year. The Nursing Staff have worked very hard, and they will be due for holidays very soon.

The domestic work of the institution has been done satisfactorily by the mothers, who undertake the duties, and are allowed a small weekly remuneration.

Many donations have been received during the year, and we have to tender our thanks to those persons who have thus shown such a kindly interest in our work.

RETURN showing cases treated during year :—  
Remaining in Hospital, 30th November, 1913, nil.

	Under 3 months.	Under 6 months.	Under 12 mths.	Under 2 years.	Over 2 years.	Total.
Admitted during year.....	77	54	58	39	3	231
Deaths .....	15	14	5	7	...	41
Discharged—Cured.....						150
"    Relieved .....						6
"    Deaths .....						41
Remaining in Hospital, 30th November, 1914.....						34
Total .....						231

Deaths occurring within a short time of admission have raised our mortality percentage considerably; twenty-five of these cases were admitted in a hopeless condition—some almost moribund, dying within a few hours. Others made slight response to stimulation for a short period, but they were so weakened by disease that death ultimately took place.

Number of bassinets in the institution .....	34
Number of beds for mothers .....	6
Average daily number of cots occupied .....	28
"    "    "    beds for mothers occupied.....	6

TABLE showing Diseases treated :—

	Cured.	Relieved.	Died.	Remain- ing in Hospital.	Total.
Gastro-enteritis .....	105	...	29	26	160
Ilio Colitis .....	3	2	...	...	5
T.B. Meningitis .....	...	...	2	...	2
Pneumonia and Gastro-enteritis .....	...	...	5	2	7
Nephritis .....	2	...	...	...	2
Erysipelas.....	2	...	...	...	2
Pertussis and Gastro-enteritis.....	...	2	1	...	3
Congenital Syphilis and Enteritis.....	...	...	2	...	2
Ophthalmia, purulent.....	6	...	...	1	7
Obstructive Jaundice .....	...	...	1	...	1
Hydrocephalus .....	...	...	...	1	1
T.B. Glands .....	...	...	...	2	2
Gastro-enteritis & Inguinal Hernia (Double)	1	...	...	...	1
Gastro-enteritis, Congenital Heart Disease...	...	...	1	...	1
Enteritis Anæmia .....	1	...	...	...	1
Enteritis and Eczema.....	9	...	...	2	11
Enteritis and Otitis Media.....	2	...	...	...	2
Gastro-enteritis and Bronchitis.....	19	2	...	...	21
	150	6	41	34	231

H. J. TURNER, Matron.

LADY EDELINE HOSPITAL FOR BABIES, "GREYCLIFFE," VAUCLUSE.

*Ladies' Auxiliary Fund.*

STATEMENT of Receipts and Expenditure to 30th November, 1914.

RECEIPTS.				EXPENDITURE.			
		£	s. d.			£	s. d.
Donations, &c. ...	...	195	16 4	Salaries and wages ...	...	36	4 2
Proceeds entertainments	...	23	6 2	Provisions ...	...	29	18 7
				Furniture ...	...	17	18 8
				Drugs ...	...	10	1 3
				Catering ...	...	8	15 0
				Vehicle hire ...	...	6	0 0
				Stationery ...	...	4	1 8
				Repairs ...	...	9	2 0
				Sundries ...	...	22	4 9
				Balance ...	...	74	16 5
Total ...	...	£219	2 6	Total ...	...	£219	2 6

MABEL CARMICHAEL, Hon. Treasurer.



## 5.—WATERFALL STATE SANATORIUM, N.S.W.

## REPORT OF THE MEDICAL SUPERINTENDENT FOR THE YEAR 1914.

*Staff.*

Honorary Consulting Physician ... ..	Dr. S. H. MACCULLOCH.
Honorary Physician ... ..	Dr. CECIL PURSER.
Medical Superintendent (resident) ... ..	Dr. H. W. PALMER.
Junior Medical Officer ... ..	Dr. H. BARET.
Lay Assistant Superintendent ... ..	Mr. C. MACDERMOTT.
Matron... ..	Miss K. WALSH.
Clerk and Storekeeper ... ..	Mr. A. DOUGLAS.

*Admissions and Discharges.*

							No.
Patients in residence on 31st December, 1913	...	...	...	...	...	...	302
Patients admitted during 1914	...	...	...	...	...	...	524
							<hr/>
Total number of patients under treatment	...	...	...	...	...	...	826
Patients discharged	...	...	...	...	...	...	380
Patients died	...	...	...	...	...	...	130
							<hr/>
							510
(Death-rate percentage of total discharges, 25.4 per cent.)							
Patients remaining in residence on 31st December, 1914	...	...	...	...	...	...	316
							<hr/>
Average daily number of occupied beds	...	...	...	...	...	...	309
Discharged—							
Arrested cases	...	...	...	...	...	...	96
Much improved cases	...	...	...	...	...	...	119
Improved cases	...	...	...	...	...	...	125
Unimproved cases	...	...	...	...	...	...	40
							<hr/>
							380
							Days.
Average residence of all discharged patients...	...	...	...	...	...	...	193
“ ” arrested cases	...	...	...	...	...	...	271
“ ” much improved cases	...	...	...	...	...	...	182
“ ” improved cases	...	...	...	...	...	...	131
“ ” unimproved cases	...	...	...	...	...	...	185
“ ” deceased patients	...	...	...	...	...	...	209
Total cost of maintenance and treatment of patients	...	£15,267	17s.	4d.			
Average cost of patients per annum	...	£49	8s.	2d.			

I HAVE the honor to report that during the year 1914 there have been 826 patients under treatment. There were 302 patients in residence at the beginning of the year, and 524 were admitted during the year.

During this period 380 patients were discharged and 130 deaths occurred. Of those discharged 96 patients had the disease arrested, and were able practically to return to every-day life, while 119 patients were greatly improved, and, though not actually arrested, were capable of doing a fair day's work. Of the others discharged, 125 received some benefit during their stay, while 40 patients left without having obtained any apparent benefit.

The total number of patients treated this year was less than in 1913, due largely to the fact that less female patients applied. In regard to the men, it was impossible to avoid overcrowding owing to the numbers applying, and also to the fact that the average residence was 193 days against an average stay of 169 days in 1913. This lengthened residence is largely responsible for the marked improvement in results, 96 patients having the disease arrested this year against 60 last year, while only 40 cases this year left unimproved as against 66 unimproved in 1913.

During the year the nascent iodine treatment was tried on a number of patients, but the initial improvements were not continued in most cases, though some cases were benefited.

A medical practitioner from one of the other States, who announced that he had discovered a cure for tuberculosis, was given an opportunity here of testing his specific. He selected 29 patients whom he considered suitable cases. Fifteen of these were treated with his specific, the other 14 not receiving the specific, but otherwise undergoing exactly similar treatment; 3 patients acted as “controls.” After several months' trial the special treatment was abandoned, as none of the patients apparently had received any appreciable benefit from it.

All the methods used in previous years were continued, but for specific remedies the tuberculins still hold their own and are used in all suitable cases.

Treatment in all cases has been on Sanatorium lines which easily holds its own against specific remedies. Light, sunshine, fresh air, rest when necessary, and graduated exercise, diet, and contented minds, with a determination to improve are still the main factors in treatment.



There have been many changes in the personnel of the Nursing Staff, as many of our nurses have entered on full training in one or other of the general hospitals, or have been transferred. For some months we were without a sub-Matron, but thanks to the Coast Hospital, who lent us two nurses, work was carried on satisfactorily.

Our patients have been very contented, few complaints being made, probably due to the good feeling existing amongst themselves and towards the Staff.

Amusements of the patients are regulated by a committee appointed from amongst themselves. This committee gets up entertainments, competitions, and takes charge of all the different sports. Later it is hoped that this committee will be of great use with the outdoor improvements.

During the year the Public Works Department has placed in position a new steam boiler, and when this is connected to the hospital steam service it should prove satisfactory, and effect a considerable saving in the quantity of fuel used.

Unfortunately nothing has so far been done in regard to other necessary works which have been approved, such as the erection of cottages for the married staff, removal of the old boiler to a permanent site, and rearranging the steam connections. A steam disinfecter is also waiting to be installed. These works are urgently needed and should be hurried on to completion.

The Nurses' Home is overcrowded, and when, as often happens, sick nurses require treatment, the want of a nurses' sick room is badly felt.

Owing to the need of strict economy, improvements have not been so marked this year, but those already started have been brought into better condition.

The orchard has given good results with some fine fruit and a superabundance of the different vegetables grown, so that we have been able to distribute large quantities to other institutions.

Recently a motor lorry was obtained to replace three horses and drays. So far the results are all that were expected, a great saving in time and labour being effected, not to mention the added convenience and the saving of expense.

Statistical tables are appended relating to the patients under treatment.

H. W. PALMER,

Medical Superintendent.

26/2/15.

#### HOSPITAL Staff on 31st December, 1914.

Medical and Administrative.	No.	Nursing.	No.	General.	No.
Medical Superintendent...	1	Sub-matron .....	1	Foreman .....	1
Assistant Medical Officer..	1	Nurses .....	22	Artisans .....	2
Assistant Superintendent.	1			Male Cooks .....	2
Matron .....	1			Kitchenman .....	1
Clerk .....	1			Attendants .....	5
				Female Servant .....	1

#### NUMBER of Wards and Beds.

No. of Ward.	Capacity in cubic feet.	No. of Beds and Cots.	Cubic feet to each bed.	No. of beds in open air.	No. of Ward.	Capacity in cubic feet.	No. of Beds and Cots.	Cubic feet to each bed.	No. of beds in open air.
1	28,800	28	1,028	24	8	28,800	28	1,028	.....
2	28,800	23	1,028	.....	9	28,800	24	1,200	.....
3	28,800	28	1,028	.....	10	28,800	24	1,200	.....
4	28,800	28	1,028	.....	11	28,800	24	1,200	.....
5	21,600	18	1,200	.....	12	28,800	24	1,200	.....
6	21,600	18	1,200	.....	13	28,800	24	1,200	.....
7	23,800	28	1,028						

#### CONDITION of Patients on Admission and Discharge during Year 1914.

Condition on Admission.	Arrested.	Much Improved.	Improved.	Unimproved.	Died.	Remarks.
Ineipient .....	19	2	...	2	...	2 cases unimproved, stayed in less than two weeks.
Moderately early .....	51	57	32	...	...	
Moderately advanced .....	26	54	76	16	28	
Far advanced .....	...	6	17	22	102	
Total .....	96	119	125	40	130	

Arrested Cases—Have no sign of active disease; temperature normal; no sputum, and able to do a fair amount of work.

Much Improved cases—Have slight signs of active disease; temperature normal; with or without sputum; fit for light work.

Improved cases—Disease more or less active, with varying degrees of improvement since admission.

Unimproved cases—Disease progressing, or no apparent improvement.

\*37741—L

TABLE to correct Value of Averages and Results—1914.

	In residence over 3 years.	In residence over 2 years and under 3 years.	In residence over 1 year and under 2 years.	In residence over 6 months and under 12 months.	In residence 14 days and under 1 month.	In residence under 14 days.
Arrested cases .....	2	...	15	32	...	...
Much improved .....	1	4	16	41	2	...
Improved .....	2	...	3	3	4	14
Deaths .....	4	3	14	23	9	9

Sanatorium cases generally stay 6 to 12 months. Cases staying over this period affect results adversely, as do patients who stay a very short period. Such cases only are given in this table.

BIRTHPLACE of Patients discharged in 1914.

Country.	No. of patients.	Country.	No. of patients.
New South Wales .....	231	Sweden .....	2
England .....	102	United States of America .....	2
Scotland .....	38	Wales .....	2
Ireland .....	38	Asia Minor .....	1
Victoria .....	35	Barbados .....	1
Tasmania .....	10	Greece .....	1
Germany .....	10	India .....	1
New Zealand .....	9	Jersey .....	1
Queensland .....	8	Norway .....	1
France .....	4	Russia .....	1
South Australia .....	3	South Africa .....	1
Austria .....	2	Shetland Islands .....	1
Ceylon .....	2	West Indies .....	1
Italy .....	2		

OCCUPATIONS of Patients Discharged or Died during 1914.

Housework .....	72	Electricians .....	3	Coppersmith .....	1
Labourers .....	67	Glass workers .....	3	Estate agent .....	1
Housewives .....	56	Hairdressers .....	3	Florist .....	1
Clerks .....	25	Hotelkeepers .....	3	Fruiterer .....	1
Children .....	24	Ironworkers .....	3	Gas employee .....	1
Quartz Miners .....	20	Laundresses .....	3	Governess .....	1
Carpenters .....	14	Railway employees .....	3	Grocer .....	1
Seamen .....	14	Saddlers .....	3	Horsebreaker .....	1
Shop assistants .....	11	Blacksmiths .....	2	Ironmonger .....	1
Cooks .....	9	Boilermakers .....	2	Linesman .....	1
Drivers .....	9	Bookbinders .....	2	Medical practitioner .....	1
Farmers .....	9	Bootmakers .....	2	Messenger .....	1
Printers .....	9	Butchers .....	2	Miller .....	1
Drapers .....	8	French polishers .....	2	Nurse .....	1
Painters .....	7	Journalists .....	2	Packer .....	1
Tailors .....	7	Overseers .....	2	Piano-maker .....	1
Factory hands .....	6	Photographers .....	2	Potter .....	1
Engineers .....	6	Plumbers .....	2	Plasterer .....	1
Needlework .....	6	Police men .....	2	Postman .....	1
Canvassers .....	5	Stewards .....	2	Sanitary inspector .....	1
Firemen .....	4	Tram conductors .....	2	Sawyer .....	1
Grooms .....	4	Bacon curer .....	1	Stationer .....	1
Hawkers .....	4	Bailiff .....	1	Tinter .....	1
Musicians .....	4	Book-keeper .....	1	Tiler .....	1
Rockhoppers .....	4	Bread-carter .....	1	Tinsmith .....	1
Stonemasons .....	4	Cabinetmaker .....	1	Typist .....	1
Storemen .....	4	Chaireaner .....	1	Umbrella-maker .....	1
Wharf labourers .....	4	Chemist .....	1	Undertaker .....	1
Attendants .....	3	Cigarmaker .....	1	Whipmaker .....	1
Chauffeurs .....	3	Clergyman .....	1		

AGES of Patients Discharged and Deceased, 1914.

1 to 9 years.	10 to 19 years.	20 to 29 years.	30 to 39 years.	40 to 49 years.	50 to 59 years.	60 to 69 years.	70 to 79 years.	80 to 89 years.
13	31	162	125	106	55	16	2	...

## 6.—ROOKWOOD STATE HOSPITAL AND ASYLUM FOR MEN, LIDCOMBE.

REPORT OF THE MEDICAL SUPERINTENDENT FOR THE YEAR ENDED  
31st DECEMBER, 1914.

### *Honorary Staff.*

Honorary Staff Surgeon.—The Hon. J. B. NASH, M.D., M.R.C.S., Eng., M.L.C.  
Honorary Ear, Throat, and Nose Surgeon.—W. A. DUNN, M.R.C.S., Eng.  
Honorary Ophthalmic Surgeons.—A. WALLACE WEIHEN, M.D., B.Sc., Guy Pockley, M.B., M.S.  
Honorary Dermatologist.—CHAS. AYRES, M.B. Ch.M.  
Honorary Neurologist.—ANDREW DAVIDSON, M.D.  
Honorary Assistant Surgeons.—WM. CHAS. GREY, M.B. M.S.; Piero Fiasehi, M.R.C.S., Eng., and JAMES REIACH, M.B., M.S.  
Honorary Masseuse.—Mr. R. BERNARD JOB.

### *Resident Staff.*

Medical Superintendent (resident).—R. A. FOX, M.B., Ch.M.  
Junior Medical Officer (resident).—W. A. McDONALD, M.B., Ch.M.  
Assistant Superintendent.—T. WALDEN HANMER.  
Dispenser.—W. LUNNEY.  
Matron.—M. SHERWOOD.  
Clerk.—A. T. LORD.

### *Land Area and Buildings.*

This State Hospital and Asylum is situated about a mile from the Lidcombe railway station, in the Metropolitan District, and the area set apart for the purposes of the institution amounts to about 550 acres. The building used for hospital patients and asylum inmates are wholly modelled on the pavilion principle. The whole of the dormitories and buildings used by the patients and inmates are on the ground level. There are thirteen hospital divisions, accommodating 678 patients under active medical treatment and nursing care, in addition to the general dormitories, accommodating 743 asylum cases. The total inmate population of this institution at the close of the year was 1,328, as compared with 1,229 on 31st December, 1913.

### *Admissions and Discharges.*

Number in on 1st January, 1914	...	...	...	...	...	1,229
Admitted during the year ended 31st December, 1914	...	...	...	...	...	3,622
						<hr/> 4,851
Discharged	...	...	...	...	...	2,933
Died	...	...	...	...	...	590
						<hr/> 3,523
Number in on 31st December, 1914	...	...	...	...	...	<hr/> 1,328
Number of hospital patients	...	...	...	...	...	642
Increase in population compared with preceding year	...	...	...	...	...	41

The Rookwood State Hospital and Asylum is the largest institution of its kind in the Commonwealth, and has accommodation for 1,421 inmates. The average daily population during 1914 was 1,310, and 3,622 persons were admitted during the year.

The building accommodation is made up of hospital blocks and asylum or "yard" blocks. Patients on admission who require medical treatment are sent into the wards, whilst those who can be treated as outdoor patients, or require no medical attention, are sent into the "yard" portion of the institution.

*Hospital Divisions.*—The wards number thirteen, and are directly under the care of the resident medical staff. An attempt at classification within certain limits has been made.

There are two wards, EP1 and EP2, for epileptic and mental cases, with accommodation for 137.

Certifiable cases are transferred to the hospitals for the insane. There were 66 transfers during the year. Certain of the younger epileptics are at work in the garden under supervision.

Dermatological cases are treated in a special ward (Skin Ward), with accommodation for 49. The work in this ward is detailed in a report under specialised departments.

Standing in its own grounds, within the institution, is the Chest Ward for the treatment of tubercular cases. The ward holds accommodation for about 60 patients, but the accommodation proved totally insufficient for the demand for beds, and a temporary but partial solution was found by the erection in the grounds of a marquee (tent), with accommodation for a further 14. The transfers to Waterfall Sanatorium during the year numbered 65.



The number of tubercular patients applying for admission overtakes the resources of the institution, and increased hospital accommodation for such patients within the State is a matter of urgency.

The deaths from the "White Plague" in this institution during the year amounted to 116, or 20 per cent. of the total deaths.

The grounds round the Chest Ward are cared for by the patients, and the well-kept lawns, gardens and paths were the subject of favourable official comment during the year. A good deal of anxiety was caused by the inadequate water supply to this and also to EP Ward.

The number of tubercular patients under our care amounts to a daily average of about 118. The Lock Ward accommodates 6 patients, any number in excess being transferred to Liverpool State Hospital and Asylum. A number of injections of Salvarsan and Neo-Salvarsan was given during the year.

There is a ward (H) with accommodation for 35 genito-urinary and rectal cases. Genito-urinary and rectal surgical cases after operation are transferred to this ward, and this special work is hampered by a most inadequate hot-water service, affecting this and the adjoining ward (I).

There is an isolation block with accommodation for 6 patients, but this proved insufficient for our needs owing to the smallpox epidemic. To adequately protect the institution from the possibility of an epidemic, a block (No. 3) from the "yard" accommodation was used for the segregation of all new admissions—unvaccinated—who did not require urgent hospital treatment. On successful vaccination they were transferred to hospital or into the yard. This segregation and vaccination continued throughout the year, and entailed a great deal of extra work to the medical staff. The percentage of unvaccinated is very small, and there is probably no better protected population against an epidemic of smallpox anywhere in the State.

The Isolation Block proper was used for infective cases (fevers, &c.) until arrangements could be made for their transfer to other hospitals.

Ward F (accommodation 50) deals with fractures and cases requiring surgical dressings. Wards A, B, C, and I (50 beds in each) are for the treatment of unclassified cases of general diseases.

The Ward D is always filled to the limit of its capacity (50) with patients suffering from heart disease. Many of these cases are transfers from the Sydney hospitals, or patients who had failed to find available beds in the metropolitan institutions.

The Surgical Ward (E) contains 28 beds, with an operating theatre attached. The work in detail of this ward is shown under the specialised department, "Surgical." From the foregoing it will be seen that the hospital accommodation is capable of the reception of 678 patients.

To carry out efficiently the medical work, further appointments are necessary to the Resident Medical Staff. Arrangements had been made for a further appointment during the year, but this was cancelled owing to the financial stringency caused by the war. The Resident Medical Staff are not only responsible for the treatment of the patients as outlined above, but have further to carry out the instructions of a large honorary medical staff. With the present inadequate staffing, this cannot be efficiently performed, and it is to be hoped that additional appointments will be made as soon as possible. Further, it might be a matter of consideration as to whether the medical resources of this institution with its large Honorary Medical Staff could not be better utilized, if a large number of inmates—not requiring any medical care, but needing personal nursing attention—were transferred to other asylums equipped for the purpose.

The larger metropolitan hospitals continue to take advantage of the resources of the institution by the transfer of some of their chronic cases, and of others in whom the preliminary treatment had been carried out. The number of transfers from country hospitals diminished from 350 the previous year to 89. Inoperable cases of malignant disease were transferred to Liverpool State Hospital and Asylum. The staff continued the statistical card registration of all cases under medical treatment during the year. Owing to the large number of admissions, this is a task of some magnitude, and because of the special nature of the institution being both a hospital and asylum, some difficulty.

A series of lectures was given during the year to some of the nurses and attendants from Rookwood, Liverpool, Macquarie-street, and George-street institutions.

To the Bureau of Microbiology we are indebted for undertaking the examination of sputa, blood, and specimens; to Sydney Hospital for the X-ray diagnosis and radium and X-ray treatment of many cases. The Dental Hospital was not able to help sufficiently for our needs, and the appointment of an Honorary Dentist is a matter of urgency. Negotiations are at present in a satisfactory state, and we hope to have the services of an Honorary Dentist for 1915.

The specialised departments under the care of the visiting Honorary Medical Officers maintained their efficiency, and the thanks of the Department are due to these gentlemen for the skill and energy displayed.

The war has been responsible for considerable changes in our Honorary Medical Staff. No less than five of these gentlemen were found ready to make the necessary sacrifices

sacrifices and to answer the call of the Empire. Their services were accepted and they are now actively engaged, as follows :—

Lieut.-Colonel Nash, V.D., attached to the 2nd Australian General Hospital.  
Major W. C. Grey, attached to the 2nd Australian General Hospital.  
Captain Reiaeh, attached to the 2nd Australian General Hospital.  
Lieutenant P. Fiaschi, attached to the Australian Light Horse Field Ambulance.  
Dr. A. Wallace Weißen, engaged in local naval duties during the absence of Dr. Brennand on the "Australia."

Four attendants also were accepted for service.

Patients in hospital divisions on 31st December, 1913	...	...	609
Patients admitted to hospitals to 31st December, 1914	...	...	2,861

Total number under treatment during the year	...	...	3,470
--	-----	-----	-------

The average daily number of patients in hospital was 642 and the mortality rate 16·5 per cent.

Appended are reports on the specialised departments.

#### EAR, NOSE, AND THROAT DEPARTMENT.

We were without the services of an Honorary Aurist during the year, owing to the resignation of Dr. Cooley, and this entailed sending patients to the Out-patients' Department of Sydney Hospital. Just at the termination of the year, however, we secured the services of Dr. W. A. Dunn, who entered on his duties in December. No report, therefore, is tabulated for this department.

#### NEUROLOGICAL DEPARTMENT.

DR. ANDREW DAVIDSON (Hon. Neurologist).

Dr. Davidson was not able to visit the Institution weekly as heretofore, but came as often as possible.

The established Massage Department, under Mr. Bernard Job, will be of considerable benefit to patients under his care.

#### DERMATOLOGICAL DEPARTMENT.

Honorary Dermatologist—DR. C. AYRES.

Weekly visits were made by Dr. Ayres, and the results achieved were very satisfactory. The total number of cases tabulated was 319, and the results of treatment are detailed hereunder :—

CASES treated at the Skin Ward, Rookwood, during 1914.

Disease.	Cured.	Relieved.	Un-relieved.	Died.	Still in Ward.	Total.
Seborrhœa .....	21	1	.....	.....	.....	22
Psoriasis .....	20	8	.....	.....	4	32
Sycosis barbae.....	2	2	.....	.....	1	5
Trade eczema.....	4	.....	.....	.....	.....	4
Eczema .....	44	10	.....	3	10	67
Myxedema .....	1	.....	.....	.....	.....	1
Phthiriasis .....	63	.....	.....	.....	.....	63
Rodent ulcer .....	5	7	2	.....	2	16
Erythema .....	3	.....	.....	.....	.....	3
Herpes zoster .....	6	1	.....	.....	.....	7
Pigmented sores.....	1	.....	.....	.....	.....	1
Lupus erythematosus .....	.....	6	.....	.....	1	7
Pus infection .....	12	3	.....	.....	3	18
Varicose ulcer.....	16	3	.....	.....	.....	19
Acne vulgaris.....	5	1	.....	.....	2	8
Burns .....	1	.....	.....	.....	.....	1
Iodoform dermatitis .....	1	.....	.....	.....	.....	1
Gummata of legs .....	1	.....	.....	.....	1	2
Syphilitic dermatitis .....	7	1	.....	1	1	10
Impetigo .....	1	.....	.....	.....	.....	1
Ichthyosis .....	.....	.....	1	.....	.....	1
Epithelioma of face .....	.....	1	.....	.....	1	2
Lichen planus .....	.....	.....	.....	1	.....	1
Scabies .....	4	.....	.....	.....	.....	4
Cellulitis .....	1	1	.....	.....	.....	2
Leucoderma .....	1	.....	.....	.....	.....	1
Pruritus .....	2	.....	.....	.....	.....	2
Ulcer of mouth .....	1	.....	.....	.....	.....	1
Pityriasis rosea.....	1	.....	.....	.....	.....	1
Folliculitis .....	1	.....	.....	.....	.....	1
Urticaria .....	2	.....	.....	.....	2	4
Intertrigo.....	3	1	.....	.....	2	6
Prurigo.....	1	.....	.....	.....	.....	1
Hyperkeratosis Senilis .....	.....	.....	1	.....	.....	1
Caustic burn-dermatitis .....	.....	.....	.....	.....	1	1
Smallpox contact.....	.....	1	.....	.....	.....	1
Multiple keloids .....	.....	.....	.....	.....	1	1
	231	47	4	5	32	319



## GENERAL SURGERY.

The Hon. J. B. NASH, M.L.C., Hon. Surgeon.

DR. W. C. GREY, Hon. Assistant Surgeon.

DR. PIERO FIASCHI, Hon. Assistant Surgeon.

DR. REIACH, Hon. Assistant Surgeon.

Visits were made every Friday afternoon, and the progressive nature of the work of the preceding year was maintained. At the outbreak of war, the whole of the above staff volunteered and were accepted for service, and Dr. W. A. Ramsay Sharp was appointed Honorary Acting Surgeon. A large number of demonstrations of Meltzer's Insufflation Anæsthesia was given during the year.

The erection of a more up-to-date operation theatre with a properly-equipped sterilising apparatus is under consideration.

One hundred and seventy-five major operations were performed during the year with satisfactory results. The conditions dealt with are shown hereunder :—

Operations—Major—			
Urethral stricture .....	20	Perineal abscess .....	1
Villous papilloma of bladder .....	1	Rectal polypus .....	1
Vesical calculus .....	2	Stricture of rectum .....	1
Urethral fistula .....	7	Ulcer of bladder .....	2
Enlargement of prostate .....	8	Inguinal hernia .....	19
Tubercular testicle .....	2	Ventral hernia .....	1
Hydrocoele .....	1	Gastric carcinoma .....	8
Sarcoma of testis .....	2	Appendicitis .....	4
Fistula in ano .....	10	Epithelioma of tongue .....	1
Anal fissure .....	1	Epithelioma of lip .....	2
Malignant of rectum .....	2	Malignant of palate .....	1
Hæmorrhoids .....	8	Fractured mandible .....	2
Prolapsus ani .....	4	Rodent ulcer .....	1
Ischio-rectal abscess .....	23	Bone necrosis .....	10
Varicose veins .....	6	Pyloric fibrosis .....	1
Nerve stretching .....	2	Sacral tumor .....	1
Amputation of limbs .....	4	Esophageal stricture (malignant) .....	4
Adenoma of breast .....	1	Traumatic epilepsy .....	2
Abdominal hydatid .....	1	Cystoscopy .....	1
Laminectomy .....	2	Gall-stone .....	1
Semilunar cartilage .....	1	Empyema .....	2
Septic arthritis .....	1	Fœcal fistula .....	2
Dislocation of shoulder .....	1	Varicocoele .....	1
Ankylosis of hip .....	1	Epithelioma of face .....	1
Tubercular hip .....	1	Epithelioma of penis .....	2
Sinus of ilium .....	1	Tumor of the cæcum .....	1
Osteo-myelitis .....	2		
Abscess of jaw .....	1	Total—Major .....	176
Tumor of parotid .....	2	Minor .....	100
Pott's fracture deformity .....	2		
Renal neoplasm .....	3		276

## DISEASES OF THE EYE.

Hon. Ophthalmic Surgeons :—DR. A. WALLACE WEIHEN, DR. GUY POCKLEY.

The work in this department maintained its high standard of efficiency, and its scope and variety can be seen in the detailed list of conditions shown hereunder.

The work was under the care of Dr. A. Wallace Weihen until August, when, owing to Naval Duties he was obliged to apply for leave, and Dr. F. G. A. Pockley has since undertaken the work.

Twenty-six operations were performed during the year.

## ANALYSIS of the work of the Ophthalmic Department for the year 1914 :—

Lids—		Cornea—continued.	
Entropion .....	4	Leucoma adherens .....	2
Ectropion .....	12	Ulcer (one hypopyon) .....	8
Trichiasis .....	3	Abscess .....	1
Chalazion .....	1	Anterior staphyloma .....	5
Symblepharon .....	2	Keratitis .....	2
Blepharitis .....	12	Calcareous degeneration .....	1
Rodent ulcer of inner canthus .....	5		
Trachoma .....	5	Iris—	
Trachoma with pannus .....	4	Anterior synechia .....	2
		Posterior synechia .....	2
Lachrymal apparatus—		Seclusio pupillæ .....	1
Epiphora .....	4	Occlusio pupillæ .....	1
Conjunctiva—		Iridodialysis .....	1
Chronic conjunctivitis .....	49	Iridodonesis .....	1
Pterygium .....	13	Iritis .....	5
Pinguecula .....	1	Coloboma of iris (traumatic) .....	2
Muscles—		Prolapse of iris .....	2
Convergent squint (alternating) .....	1	Iris bombé .....	1
Divergent squint .....	2		
Nystagmus .....	2	Lens—	
Cornea—		Cataract, immature .....	41
Nebula .....	17	„ mature .....	26
Macula .....	3	„ traumatic .....	2
Leucoma .....	6	Dislocation of lens .....	7



Retina and choroid—		Glaucoma—	
Neuro-retinitis (albuminuric) .....	3	Acute, primary .....	3
Retinal detachment .....	3	„ secondary .....	5
Choroiditis .....	7	Chronic .....	5
Macular choroiditis .....	2		
Optic nerve—		Monocular diplopia .....	3
Atrophy (primary) .....	5		
„ (secondary) .....	8	Errors of refraction—	
Neuritis .....	3	Myopia .....	9
Coloboma of the optic disc .....	1	Myopic astigmatism.....	3
Toxic amblyopia .....	8	Hypermetropia .....	26
		Hypermetropic astigmatism .....	3
Vitreous—		Presbyopia .....	50
Hyalitis .....	2		
Hæmorrhage into vitreous.....	1	Orbit—	
Globe—		Melanotic sarcoma .....	1
Phthisis bulbi.....	9		
Panophthalmitis .....	1	Total conditions .....	420

#### LIST of Eye Operations during year 1914.

Cataract—Simple extraction .....	1	Glaucoma .....	1
Extraction with irideclomy .....	9	Entropion .....	1
Needling .....	5	Tarsectomy .....	4
Plastic operations .....	1		
Enucleation .....	3	Total .....	26
Pterygium .....	1		

#### Massage Department.

Hon. Masseur: R. B. JOB.

A Massage Department was installed on 6th October last under the supervision of Mr. R. Bernard Job, Honorary Masseur, and has been in operation for a period of nine weeks. Notwithstanding the short time it has been available, this department has shown very successful results. Previous to its installation all cases requiring massage treatment had of necessity to be sent to Sydney at considerable expense to the institution. Mr. Job, who has had some years experience in other hospitals in the State, reports that a very satisfactory range of cases come into his care, making the work more interesting from a massage standpoint than what would appear from the class of men that are drafted into the hospital. When the Electrical Department is fitted up this will be greater still. The policy of creating the new department has, therefore, been fully justified.

Number of cases treated	...	...	...	...	...	...	34
Treatments given	...	...	...	...	...	...	240
Recovered	...	...	...	...	...	...	12
Relieved	...	...	...	...	...	...	10
Unrelieved	...	...	...	...	...	...	3
Still under treatment	...	...	...	...	...	...	9

The very high ratio of cures obtained—35 per cent.—may be considered eminently satisfactory. One can hardly expect as good an average for 1915.

#### Farm Operations.

Assistant Superintendent: T. WALDEN HANMER.

With regard to the work of the lay portion of the Rookwood Asylum for the year 1914, the Assistant Superintendent reports that, taking into consideration the high price paid for lines of fodder, the returns of the dairy farm must be considered very satisfactory, as they show a profit of £281 12s. 6d. after paying all expenses.

The piggery shows a profit of £150 3s. 5d., the fowl yard £59 13s. 5d., and the vegetable garden £226 16s., making a total of £725 5s. 4d. The four departments are really interdependent, and, therefore, it is considered that it would be wiser to treat them as a whole than keep them separately; for instance, if it were not for the manure produced on the farm and used in the vegetable garden, the return of vegetables would be nil. Also the institution gets a vast amount of service rendered by the farm horses, which it would be quite impossible to keep a correct account of with inmate labour as drivers and labourers.

In connection with the workshops, it might be mentioned that they are kept constantly working at general repairs, painting, and alterations, and the services of the engineers, carpenters, and plumber are fully occupied and justified.

The conduct of the staff under the Assistant Superintendent's control during the year has been good.

Regarding the food supplies, during the last six months of the year the Institution was left without any contracts for bacon, eggs, and cheese, and the system of purchasing in the open market proved very much superior to outside buying, both the quality and price being much better, and considerable saving being effected.

ROBERT FOX,  
Medical Superintendent.

7.—STATE HOSPITAL AND ASYLUM FOR MEN,  
LIVERPOOL.

REPORT OF THE SENIOR MEDICAL SUPERINTENDENT FOR THE YEAR ENDED  
31st DECEMBER, 1914.

*Staff.*

Senior Medical Superintendent.—J. A. BEATTIE, L.K.Q.C.P., Irel., L.R.C.S., Irel.  
Honorary Surgeon, Ear and Throat.—R. ARTHUR, M.D., M.L.A.  
Honorary Ophthalmologist.—E. C. TEMPLE SMITH, M.B., B.S., M.R.C.S., Eng.,  
L.R.C.P., Lon., F.R.C.S., Edin.  
Matron.—L. LE JEUNE.  
Dispenser.—R. C. ROWE.  
Assistant Superintendent.—R. J. BROWN.

*Medical Work.*

During the year the services of a Junior Medical Officer have only been intermittently available—a fact which minimised the advantages expected from this appointment.

*Lock Division.*

The number of these patients has heavily increased, and the consequent overcrowding in the ward is most acute.

The number of this class of patients in hospital on 1st January, 1914								19
Admitted 1st January, 1914, to 31st December, 1914=12 months.								249
Total								268
Discharged between same dates								236
Died								1
Remaining in Hospital								31
								268

The normal accommodation of this ward is 14, but it has had to receive up to 32. Included in the patients treated in this division were some dozen German prisoners of war, admitted from the Holdsworth Concentration Camp, for whom tent space had to be improvised in our grounds.

*Cancer Division.*

Patients in Hospital on 1st January, 1914	...	...	...	...	31
Admitted from 1st January, 1914, to 31st December, 1914	...	...	...	...	105
					<hr/>
Total	...	...	...	...	136
Discharged during same period	...	...	...	...	53
Died	...	...	...	...	51
Remaining in Hospital 31st December, 1914	...	...	...	...	32
					<hr/>
					136

*Ophthalmic.*

Dr. Temple Smith, Honorary Ophthalmologist, continues his regular visits, and we always have a number of eye patients under active treatment.

*Miscellaneous.*

All our general wards have been sadly overcrowded throughout the year, and we have been perforce compelled to treat numerous cases throughout the yard dormitories, which, if space allowed, should have occupied hospital beds.

General Remarks.

The numbers passing through this institution continue to increase each year. The particulars for the past year are as follow:—

Number of inmates on 31st December, 1913								...	...	...	579
Admitted 1st January, 1914, to 31st December, 1914								...	...	1,496	
										<hr/>	
Total								...	...	...	2,075
Discharged								...	...	...	1,321
Died								...	...	...	164
										<hr/>	
										1,485	
Number of inmates on 31st December, 1914								...	...	590	
										<hr/>	2,075

*Casuals.*

Doubtless owing to the situation of this Institution on the Main Southern Road we have always had to administer in a casual way to tramps, swagmen, "sundowners," &c., and a very noticeable feature of the last few months has been the unusually increased number of casual travellers, rejects from the military camps, &c., who have sought and received temporary relief in the shape of meals, laundry, and lodging from one to three nights. Many of these derelicts arrive in a ragged and filthy condition, and are supplied with clothing from our deceased inmates' stock.

Those treated under this heading, apart from cases admitted requiring medical aid for lengthened periods, are not included in our ordinary house numbers, given above.

*Outdoor Work.—Buildings, Gardens, Grounds, and Farm.*

An improved water service throughout the institution has been recently completed by the Department of Public Works with advantage in every detail of administration.

The buildings generally have been maintained in a fair state of repair by our inmate staff of carpenters, painters, &c. The whole of the roofs, gutters, &c., have been quite recently overhauled and placed in good order by the Department's plumber (from Newington Asylum), with our inmate assistance.

The gardens and grounds immediately surrounding the hospital and adjuncts have been maintained in good order, and additional garden plots and flower beds have been laid down.

The vegetable gardens continue to yield sufficient vegetables for our use, and on occasions admit the sending of a supply to other institutions of the Department. In addition some 1,239 lb. of jam were made in our kitchen from home-grown melons.

*The Piggery.*

The purchase of brood sows at the last Royal Agricultural Show is now having a good effect on our pig stock, and the results for the coming year should be much more gratifying, but the fullest advantage from this industry cannot be expected until the contemplated removal to the more roomy areas near the septic tanks, yet to be resumed, becomes an accomplished fact.

*Domestic Work.*

Our bakery, kitchen, laundry, and bathroom services have been very efficiently conducted throughout the year. The kitchen space is daily proving more inadequate and extensions will soon be a matter of urgency.

The machinery and steam plant have been maintained in a satisfactory state by our engineer, and the pipe connections and other fittings are now in course of renewal from the stock selected at a nominal cost from the dismantled appurtenances of Darlinghurst Gaol.

I take this opportunity of commending my general staff for their assiduous attention to duty, and the uniform cordiality and promptness with which my instructions have been carried out.

*Proposed Resumptions for Extension of Operations.*

It may be emphasised in brief that our work here continues to be hampered in an increasing degree by our circumscribed space, and I have again to deplore the removal from the Departmental Estimates of the amount set down for the resumption of the adjoining areas so essential for the development of this institution.

J. A. BEATTIE,  
Senior Medical Superintendent.





## 8.—STATE HOSPITAL AND ASYLUM FOR WOMEN, NEWINGTON.

Honorary Surgeon.—WALTER ALEXANDER SHARPE, M.B., F.R.C.S.  
 Honorary Ophthalmic Surgeon.—GUY ANTILL POCKLEY, M.B.  
 Honorary Ear, Throat, and Nose Surgeon.—R. ARTHUR, M.D., M.L.A.  
 Honorary Neurologist.—A. DAVIDSON, M.D.  
 Visiting Medical Officer.—FRANCIS FURNIVAL, M.R.C.S.  
 Resident Medical Officer.—ETHEL REMFREY MORRIS, M.B., M.Sc.  
 Assistant Superintendent.—WILLIAM MCGARVEY.  
 Matron.—LETITIA HARDEN.  
 Clerk and Storekeeper.—CHARLES G. GROVE.  
 Dispenser.—ALMA REYE.

### *Buildings and Situation.*

The property on which this Institution stands is situated on the southern bank of the Parramatta River, about 3 miles distant from the Auburn railway station, and is portion of the grant of 1,200 acres to John Blaxland in May, 1807. It was known for many years as Newington Farm, and covers an area of about 270 acres, including 70 acres of swamp land.

Newington House, the old home of the Blaxland family which was Newington College for boys over thirty-five years ago, is used for the accommodation of the Matron and Nursing Staff. The building is in a sound state of preservation and very suitable for Nurses' Quarters.

There has been great alteration in Newington since the time, about the year 1878, when the old women from the Benevolent Asylum, near the Sydney Railway Station, and the buildings at the top of King-street, were removed from the city and placed in a more suitable home under Matron Hicks on the Parramatta River. These inmates were destitute and infirm, but not in need of hospital treatment. However, it was soon found that, owing to the growth of the Asylum population, increased accommodation was necessary; and that what was needed was a hospital for the treatment of the local sick, and the chronic cases from the metropolitan and country hospitals. This institution has steadily grown in these respects. At the present time half the total number of inmates is under medical treatment, and many cases are provided for which would otherwise have to be accommodated for long periods in one or other of the metropolitan hospitals.

Apart from two blocks, two stories high, constructed of brick, which are occupied by the more active inmates, the buildings used for the treatment of inmate women are designed on the pavilion plan. These pavilions are of modern construction, and compare favourably with similar provision made for the treatment of the sick in other public institutions throughout the State. The two-story blocks are provided with fire-escapes, and a nightwatchman is employed for continuous out-door supervision throughout the night.

Average number of patients in institution for year	...	...	755
Number in on 1st January, 1914	...	...	706
Admitted during the year ended 31st December, 1914	...	...	1,279
			1,985
Discharged	...	...	1,120
Died	...	...	133
			1,253
In on 31st December, 1914	...	...	732
The average daily number of patients in the hospital division for the year was	...	...	323
			311
In hospital 1st January, 1914	...	...	769
Admitted during year	...	...	1,080
			763
Discharged during year	...	...	317
Remaining in hospital 31st December, 1914	...	...	

To meet the requirements of the Honorary Medical Officers for the present an operating theatre and surgical ward are being made available. Owing to want of funds several necessary buildings have not been provided.

### *Resident Medical Officer.*

Dr. Ethel Remfrey Morris was appointed Resident Medical Officer in January, *vice* Dr. Elizabeth Hamilton-Browne resigned.

### *Honorary Medical Officers.*

Dr. Guy Antill Pockley was appointed Honorary Ophthalmic Surgeon, *vice* Dr. Marion Thorne resigned, and Dr. Walter Alexander Sharpe as Honorary Surgeon, *vice* Dr. Charles McLaurin resigned.

### *Farming*

*Farming Operations.*

W. McGarvey, Assistant Superintendent.

In connection with the farming operations which form an important adjunct to the work of the institution, the following results have been obtained :—

Number of milking cows, 93; average number of milking cows, 75; average yield per head per diem, exclusive of dry cows, 8·5 quarts; total milk yield for year, 58,415 gallons. The institutions at Liverpool and Parramatta are supplied with milk from Newington.

*Piggery.*

Proceeds from the sale of pigs, £517 8s. 1d.

*Vegetable Garden.*

Yield during year, 46,344 lb.; profit, £150 0s. 4d.

*Tallow Refinery.*

Sales during the year, £178 10s. 8d.

Efforts are still being made to render about 50 acres of reclaimed salt swamp land productive. By this reclamation, a nuisance and an unsightly frontage has been removed.

About 75 acres of good grass land which has been improved very much during the past twelve years, and which is used as a pasture area for 100 head of dairy cattle, is being taken over for abattoir purposes, and 123 acres on the south-western side of the institution, principally of ironstone formation, and almost devoid of nutritious grasses, is being resumed to replace it, but the best portion of this land cannot be compared to that to be given up.

Dairying operations cannot so successfully be carried on as in the past, and consideration of the question of acquiring a suitable area, on the South Coast for preference, for the establishment of a large dairy to provide the institutions under this Department with a pure milk supply seems necessary.

*Medical Work.*

There has been a marked increase in the number of cases requiring hospital treatment this year, as compared with last year. Unfortunately it has often happened that on admission there have been no beds available in the hospital division for these patients. In order that the cases be satisfactorily treated a corresponding increase in hospital accommodation and equipment is necessary.

A pavilion and day room for senile cases is urgently required. Isolation, Lock, and Eye wards are also needed. It is hoped that an operating theatre and surgical ward will be built in the near future.

Vaccination has been carried out systematically during the year.

We are indebted to the Department of Microbiology for the examination of specimens submitted from time to time.

Appended are tables showing the nature and number of the diseases treated in hospital during the year :—

E. R. MORRIS, M.Sc., M.B., Ch.B.

## APPENDIX.

## ORDER of Diseases treated in Hospital.

1.—General Diseases.			
Senility.....	140	Carcinoma of stomach .....	4
Debility .....	28	Carcinoma of rectum .....	1
Alcoholic debility .....	3	Gastric ulcer .....	1
Acute rheumatism.....	2	Cholecystitis.....	1
Chronic rheumatism .....	81	Hepatitis.....	2
Myositis.....	1	Pancreatitis .....	1
Gout .....	1	Fistula in ano .....	1
Diabetes .....	2		98
Rheumatic arthritis .....	8	3. Circulatory.	
Coryza .....	1	Organic diseases of heart .....	33
Influenza.....	11	Aneurism .....	1
Malaria .....	1	Arterio sclerosis .....	4
Myxodema .....	2	Endarteritis .....	1
Syphilis—secondary.....	3	Varicose veins and hæmorrhoids .....	14
Syphilis—tertiary.....	8	Anæmia .....	5
	292	Cerebral hæmorrhage .....	1
		Phlegmasia alba dolens .....	1
2. Alimentary System.			60
Pyorrhœa alveolaris .....	2	4. Respiratory System.	
Gastritis .....	47	Nasal catarrh .....	1
Intention.....	2	Laryngitis.....	1
Colitis .....	2	Acute bronchitis .....	3
Constipation.....	13	Chronic bronchitis .....	57
Intestinal stasis .....	1	Asthma .....	9
Diarrhœa .....	7	Broncho-pneumonia.....	4
Umbilical hernia.....	7	Lobar pneumonia .....	1
Inguinal hernia .....	1	Pleurisy .....	1
Femoral hernia .....	2	Phthisis.....	29
Strangulated hernia .....	1	Goitre .....	3
Carcinoma of lip .....	1		109
Carcinoma of parotid .....	1		



5. *Genito-urinary System.*

Chronic Nephritis .....	3
Dysuria.....	1
Cystitis .....	3
Hæmaturia .....	1
Ovaritis.....	1
Menorrhagia .....	1
Metrorrhagia .....	2
Endometritis .....	1
Leucorrhœa .....	1
Chronic Gonorrhœa .....	1
Carcinoma of uterus .....	6
Syphilis of cervix of uterus .....	1

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6. *Nervous System.*

Alcoholic neuritis.....	4
Non-alcoholic neuritis .....	4
Neurasthenia.....	7
Neuralgia .....	1
Herpes zoster .....	3
Insomnia .....	2
Hysteria .....	1
Post-puerperal mania .....	1
Feeble-mindedness .....	63
Dementia .....	2
Acute mania .....	1
Epilepsy.....	24
Chorea .....	2
Tabes .....	2
Idiocy.....	1
Paralysis agitans .....	4
Hemiplegia .....	32
Paraplegia.....	9
Congenital paresis .....	1
Congenital paralysis .....	1
Paresis .....	3
Sciatica .....	4
Lumbago .....	1
Blindness .....	10
Paralytic stroke (undefined) .....	1
Myelitis .....	3

187

7. *Skin, Cellular Tissues, and Glands.*

Simple ulcer on face .....	1
Simple ulcer on thigh .....	1
Varicose ulcers on leg .....	36
Syphilitic ulcers on leg .....	55
Gangrene of foot .....	2
Carbuncle.....	1
Furuncle .....	1
Abscess in neck .....	1
Abscess in face .....	1
Abscess in groin.....	1
Witlow .....	1
Cellulitis of neck .....	1
Bedsore.....	2
Sores after blood poisoning .....	1
Rodent ulcer .....	3
Suppurative mastitis .....	2

Carcinoma of breast.....	7
Enlarged glands in groin .....	1
Eczema.....	23
Erysipelas.....	6
Erythema nodosum.....	1
Psoriasis.....	2
Kraurosis vulvæ .....	1
Pruritis vulvæ .....	2
Seborrhœa capitis .....	1
Pediculi capitis .....	1
Scabies .....	2
Corns on feet .....	2
Papillomata .....	1

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8. *Eye Conditions.*

Acute trachoma .....	2
Acute conjunctivitis .....	2
Chronic conjunctivitis.....	2

6

9. *Injuries.*

Traumatic ulcers .....	8
Burns.....	4
Scalds .....	2
Dislocation shoulder .....	2
Fracture of clavicle.....	1
Fracture of humerus .....	1
Fracture of femur .....	3
Sprains .....	4
Contusion, face and lips .....	2
Other injuries.....	19

46

10. *Miscellaneous.*

Exhaustion .....	2
Observation .....	2
Convalescing.....	3
Abdominal neoplasm .....	1
Pelvic tumour .....	1
Malignancy (not defined) .....	2
Congenital deformity .....	1
Disfigurement to face.....	1
Cyst in groin .....	1

14

*Totals.*

General Diseases.....	202
Alimentary System .....	98
Circulatory .....	60
Respiratory System .....	109
Genito-urinary System .....	22
Nervous System .....	187
Skin, Cellular Tissues, and Glands .....	160
Eye Conditions .....	6
Injuries .....	46
Miscellaneous .....	14

994

## Deaths during 1914.

Senility .....	58	Morbus cordis .....	11
Carcinoma.....	11	Mitral stenosis.....	1
Abdominal neoplasm .....	1	Arterio sclerosis .....	4
Carbuncle.....	1	Pulmonary tuberculosis.....	8
Gangrene .....	1	Bronchitis.....	9
Exhaustion .....	6	Paralysis .....	2
Diabetes .....	1	Myelitis .....	2
Syphilis .....	1		
Cerebral hæmorrhage .....	6		
Syncope.....	10		

133

= 12.31 per cent. of cases treated in hospital.

## OPERATIONS.

This year a small room was set apart and partly equipped for operating purposes. Operations in it were started in November. During 1914, seventeen operations were performed, as follows:—

Excision of rodent ulcer.....	2	Enucleation of eye .....	1
Excision of lipoma .....	1	Cataract extraction.....	2
Excision of papilloma.....	3	Tarsectomy .....	2
Sequestrectomy .....	1	Iridectomy .....	2
Removal of uterine fibroid.....	1		
Curettage .....	2		

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*B.—Out-patients.*

(Patients from Asylum Yard and Cottages.)

During 1914, 615 patients were treated. Total number of visits, 1,780. The order of diseases treated in Out-patients was as follows:—

1. General.		6. Nervous System.	
Senility.....	11	Epilepsy .....	8
Syphilis .....	1	Insomnia.....	2
Inanition.....	6	Neurasthenia .....	4
Marasmus .....	1	Neuritis.....	5
Asthenia (including alcoholic debility) .....	129	Neuralgia .....	6
Coryza .....	25	Sciatica .....	1
Influenza.....	35	Lumbago .....	7
Rheumatism .....	33	Bell's palsy .....	1
Gonorrhœa .....	1	Infantile paralysis .....	1
Myxœdema .....	1	Headache .....	12
Gout .....	2	Earache .....	5
Acute alcoholism .....	3	Deafness .....	1
	248	Delusions .....	1
		Vertigo .....	1
			55
2. Alimentary System.		7. Skin, Cellular Tissues, and Glands.	
Tonsillitis .....	11	Eczema .....	6
Pharyngitis.....	1	Erythema .....	1
Gastritis (including alcoholic) .....	130	Acne vulgaris .....	1
Constipation .....	64	Impetigo .....	1
Diarrhœa .....	19	Psoriasis .....	2
Dysentery.....	1	Ringworm .....	1
Intestinal intoxication .....	2	Scabies .....	1
Ulcerated mouth .....	1	Herpes zoster .....	1
Parotitis.....	1	Axillary abscess .....	1
Dentagra.....	15	Witlow .....	1
Perihepatitis .....	1	Gangrene of foot.....	1
Cholelithiasis .....	2	Ulcerated leg.....	3
Umbilical hernia .....	4	Rodent ulcer .....	1
Femoral hernia .....	1	Carcinoma of breast .....	2
Stricture of rectum .....	1		23
	254		
3. Circulatory System.		8. Eye Conditions.	
Organic diseases of heart .....	16	Partial blindness .....	2
Arterio sclerosis .....	1	Iritis .....	1
Varicose veins and hæmorrhoids .....	16	Inflammation of eye socket .....	1
Anæmia .....	7	Conjunctivitis .....	5
Angina pectoris .....	1	Chronic trachoma .....	8
	41	Cataract .....	1
			18
4. Urino-genital System.		9. Miscellaneous.	
Cystitis .....	8	Abdominal neoplasm .....	1
Nephritis.....	6	Colles, fracture.....	1
Prolapsed uterus.....	1	Ingrowing toe-nails .....	1
Ovarian tumour.....	1	Other injuries.....	10
	16		13
5. Respiratory System.		Totals.	
Ozena .....	1	General.....	248
Nasal Catarrh .....	3	Alimentary System .....	254
Laryngitis.....	1	Circulatory System .....	41
Bronchitis.....	70	Urino-genital System .....	16
Asthma .....	9	Respiratory System .....	86
Pleurodynia .....	1	Nervous System .....	55
Pleurisy .....	1	Skin, Cellular Tissues, and Glands .....	23
	86	Eye Conditions .....	18
		Miscellaneous .....	13
			758

Minor operations performed in Out-patient Department, including Dental Extractions, 184.

Amongst the Yard patients there are on the average some 30 to 40 epileptics.

*C.—Ophthalmic Department.*

During the year fifty-two cases have been treated, including refraction, medical, and surgical cases. The prevalence of trachoma amongst the asylum patients would justify the setting apart of an isolation ward in which these cases might be treated.

## 9.—STATE ASYLUM FOR AGED AND INFIRM MEN, GEORGE-STREET, PARRAMATTA.

Visiting Medical Officer.—DR. W. S. BROWN.

Matron.—MRS. M. PEAKE.

### *Admissions and Discharges.*

Number of inmates in residence on 31st December, 1913	...	215
Number of inmates admitted 1st January, 1914, to 31st December, 1914	... ..	1,184
		1,399
Discharged	... ..	1,130
Died	... ..	4
		1,134
		265
Average daily number in residence...	... ..	262
Expenditure for the year	... ..	£4,727

### *Report of Operations for year 1914.*

**Buildings and Grounds.**—The wall round the institution has been completed. The Matron's and the Clerk's offices were renovated and several minor repairs effected. The buildings throughout were painted.

**Workshops.**—Following are the number and value of articles made during year :—

	£	s.	d.
178 Tweed coats, at 10s.	...	...	...
209 Tweed vests, at 3s. 7d.	...	...	...
227 Tweed trousers, at 7s. 6d.	...	...	...
130 Corduroy trousers, at 5s.	...	...	...
108 Drawers, flannel, at 2s. 8d.	...	...	...
119 Shirts, flannel, at 3s. 6d.	...	...	...
474 pairs Boots, leather, at 5s. 3d. per pair	...	...	...
	£403	14	5

The Visiting Medical Officer, Dr. W. S. Brown, visited the institution on 297 occasions, and attended to 2,886 patients, of whom 346 were transferred to other institutions for hospital treatment.

Regular monthly visits at night were made by the Chief Attendant.

The conduct and discharge of duties by the staff were satisfactory.

**M. PEAKE,**  
Matron.



# 10.—STATE ASYLUM FOR THE BLIND, AND FOR MEN SUFFERING FROM DEFECTIVE SIGHT AND SENILITY, MACQUARIE-STREET, PARRAMATTA.

Visiting Medical Officer.—DR. W. S. BROWN.

Matron.—MISS MARY CRIMES.

This institution is—as has already been reported—unsuitable for the purpose for which it is used. Close upon 100 years ago the buildings were erected as military barracks, and since their occupation for asylum purposes many improvements, particularly in remedying structural defects, have been effected, but even with these it was considered undesirable to have hospital patients in occupation, consequently some few years ago the whole of the patients were by order of the Inspector-General of Charities transferred to the hospital divisions at other institutions, where better provision existed for their treatment and care.

The area of land attached to the institution is about  $6\frac{1}{2}$  acres, 1 acre of which is under cultivation; the balance is laid out in lawns and flower gardens.

The Visiting Medical Officer visited the Asylum on 340 occasions during the year, when he saw 1,930 inmates, 390 of whom he transferred to other institutions for treatment.

There were no cases of serious illness or deaths during the year.

One hundred and sixty-five men were vaccinated as a protection against smallpox.

Regular monthly visits at night were made by the Chief Attendant whose reports were satisfactory.

The Library for use of inmates contains over 2,000 volumes, and at intervals fresh supplies are obtained from the City Municipal and Free Public Libraries. In conjunction with the library is a reading room, where the daily and weekly papers and illustrated periodicals are provided.

## *Admissions and Discharges.*

Number in residence on 31st December, 1913	...	...	...	149
Number admitted during the year ended 31st December, 1914	...	...	...	1,112
				<hr/> 1,261
Number discharged	...	...	...	1,075
				<hr/>
Number remaining in on 31st December, 1914	...	...	...	186
Increase compared with preceding year	...	...	...	37
Average daily number in residence	...	...	...	186
Expenditure for the year	...	...	...	£3,465

## *Bakery.*

As in past years, the bread required at the State Hospitals at Lidcombe and Newington and the Parramatta Asylums, has been baked at this institution. Following are details of the year's operations:—

Bread baked (white and brown)	...	...	...	807,928 lb.
Cake baked	...	...	...	48,147 „
Buns baked, 444½ dozen	...	...	...	5,334
				<hr/> 861,409 „
Distribution—				
Lidcombe State Hospital and Asylum	...	...	...	428,686 lb.
Newington State Hospital and Asylum	...	...	...	214,575 „
George-street State Asylum	...	...	...	89,386 „
Macquarie-street State Asylum	...	...	...	64,716 „
Cottage Homes for Aged Couples	...	...	...	9,376 „
				<hr/> 806,739 „

The profit on the bakery transactions amounted to £792.

The vegetable garden yielded 9,856 lb. of vegetables.

With the exception of boots and hats, the clothing requirements for inmates were made in the institution workshops.

The large recreation and shelter sheds were enclosed, and the messrooms renovated and painted.

The conduct of the staff and the manner in which they carried out their duties have been satisfactory.

M. CRIMES,  
Matron.

## 11.—COTTAGE HOMES FOR AGED COUPLES, PARRAMATTA.

ANNUAL REPORT FOR THE YEAR 1914.

### *Staff Attendant-in-Charge.*

As shown by the previous report, only fifteen out of the twenty cottages were occupied on the 31st December, 1913. During the year 1914 this number was reduced to twelve—two women having died, and the husbands obtained pensions and left the cottages. The third vacancy occurred through the removal of a couple for disciplinary reasons.

The buildings are somewhat out of repair and need painting and renovating, but the surroundings are fairly attractive. Each couple has a small garden plot in front of their cottage, while the large lawn (common to all cottages) at the rear is well kept and is provided with seats for the use of the inmates.

The library and reading room is well provided with books, magazines, newspapers, &c., and appears to be much appreciated.

The various provision supplies received during the year were of good quality] Milk is supplied every morning from the dairy at Newington.

ALFRED LAKE,

Inspector of State Hospitals and Asylums.

## 12.—SUMMARY.

## STATE HOSPITALS AND ASYLUMS FOR THE INFIRM—STATISTICAL TABLES.

No. 1.—RETURN showing the number of Inmates sheltered and under treatment in the State Hospitals and Asylums during the year ended 31st December, 1914.

	In Asylum, 31st December, 1913.		Admitted during the year.		Discharged.		Died.		In Asylum, 31st December, 1914.		Total.
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	
Cottage Homes .....	15	15	...	...	2	2	2	1	11	12	23
George-street Asylum ...	215	...	1,184	...	1,130	...	4	...	265	...	265
Liverpool State Hospital	579	...	1,496	...	1,321	...	164	...	590	...	590
Macquarie-street Asylum	149	...	1,112	...	1,075	...	...	...	186	...	186
Newington State Hospital	85	621	208	1,071	203	917	...	133	90	642	732
Rookwood State Hospital	1,229	...	3,622	...	2,933	...	590	...	1,328	...	1,328
Waterfall Sanatorium ...	297	85	533	199	424	158	98	40	308	86	394
	2,569	721	8,155	1,270	7,088	1,077	858	174	2,778	740	3,518

No. 2.—RETURN showing the Number of Inmates in the State Hospitals and Asylums on the 30th June of the following years :—

	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	30th June, 1912.	31st Dec., 1912.	31st Dec., 1913.	31st Dec., 1914.
Cottage Homes .....	43	43	45	42	43	42	35	29	32	32	30	23
George-street Asylum ...	951	951	821	782	709	434	249	191	175	245	215	265
Liverpool State Hospital	868	850	798	714	716	668	628	604	591	550	579	590
Macquarie-street Asylum	314	298	282	263	260	241	232	196	168	151	149	186
Newington State Hospital	812	805	797	771	800	785	759	769	741	728	706	732
Rookwood State Hospital	1,301	1,300	1,316	1,254	1,319	1,434	1,440	1,299	1,272	1,173	1,229	1,328
Waterfall Sanatorium ...	...	...	...	...	...	200	247	259	324	351	382	394
Total .....	4,289	4,247	4,059	3,826	3,847	3,804	3,590	3,347	3,303	3,230	3,290	3,518

No. 3.—RETURN showing the percentages of Deaths, also Average Ages of Deceased Inmates during the year ended 31st December, 1914.

Institution.	Deaths.	Death-rate per 100 persons dealt with.	Average age.
Cottage Homes .....	3	10	74
George-street Asylum .....	4	28	62
Liverpool State Hospital .....	164	8.82	67.49
Macquarie-street Asylum .....	.....	.....	.....
Newington State Hospital .....	133	11.3	67.9
Rookwood State Hospital .....	590	13.4	66.2
Waterfall Sanatorium.....	138	12.38	37

No. 4.—RETURN showing ages of inmates who were in the State Hospitals and Asylums on 31st December, 1914.

Institution.	Under 20 years.	21 to 30.	31 to 40.	41 to 50.	51 to 60.	61 to 70.	71 to 80.	81 to 90.	91 to 100.	Over 100.	Total.
Cottage Homes .....	...	...	...	1	...	10	7	4	1	...	23
George-street Asylum ...	...	...	2	12	75	121	47	7	1	...	265
Liverpool State Hospital	2	25	26	55	120	159	139	59	4	1	590
Macquarie-street Asylum	...	1	3	15	48	69	46	4	...	...	186
Newington State Hospital	7	34	48	99	155	165	152	64	8	...	732
Rookwood State Hospital	4	27	74	171	274	368	291	110	9	...	1,328
Waterfall Sanatorium ...	32	75	87	80	65	48	7	...	...	...	394
Total .....	45	162	240	433	737	940	689	248	23	1	3,518



No. 5.—RETURN showing the Ages of Inmates who Died in the State Hospitals and Asylums during the year ended 31st December, 1914.

Institution.	Under 30.	Above the age of—								Total.
		30.	40.	50.	60.	70.	80.	90.	100.	
Cottage Homes .....	...	...	...	1	...	...	2	...	...	3
George-street Asylum .....	...	...	1	1	1	...	1	...	...	4
Liverpool State Hospital .....	2	8	7	23	40	48	33	3	...	164
Macquarie-street Asylum .....	...	...	...	...	...	...	...	...	...	...
Newington State Hospital.....	5	6	8	14	18	43	32	7	...	133
Rookwood State Hospital.....	19	36	52	84	128	158	103	10	...	590
Waterfall Sanatorium .....	42	44	28	17	7	...	...	...	...	138
Total.....	68	94	96	140	194	249	171	20	...	1,032

No. 6.—DISEASES from which the Inmates who died suffered during the year ended 31st December, 1914.

	Cottage Homes.	George-street.	Macquarie-street.	Liverpool.	Newington.	Rookwood.	Waterfall.	Total.
General Diseases—								
Influenza .....	.....	.....	.....	.....	.....	5	.....	5
Phthisis .....	.....	.....	.....	2	8	119	136	265
Malaria .....	.....	.....	.....	.....	.....	1	.....	1
Cancer .....	.....	.....	.....	60	11	33	.....	104
Rheumatism .....	.....	.....	.....	.....	.....	4	.....	4
Alcoholism, Acute .....	.....	1	.....	.....	.....	3	.....	4
Rheumatism, Arthritis... ..	.....	.....	.....	.....	.....	1	.....	1
Gout .....	.....	.....	.....	.....	.....	4	.....	4
Syphilis .....	.....	.....	.....	.....	1	4	.....	5
Diabetes, Mellitis .....	.....	.....	.....	.....	1	2	.....	3
Anæmia .....	.....	.....	.....	.....	.....	5	.....	5
Cystitis .....	.....	.....	.....	4	.....	7	.....	11
Miscellaneous .....	.....	.....	.....	7	.....	13	.....	20
Gangrene .....	.....	.....	.....	.....	1	.....	.....	1
Diseases of the Nervous System—								
Paralysis .....	.....	.....	.....	8	2	21	.....	31
Cerebral Hæmorrhage ...	.....	2	.....	2	6	44	1	55
Epilepsy .....	.....	.....	.....	.....	.....	11	.....	11
Dementia .....	.....	.....	.....	.....	.....	52	.....	52
Chronic Brain Disease... ..	.....	.....	.....	.....	.....	3	.....	3
Myelitis .....	.....	.....	.....	.....	4	.....	.....	4
Diseases of Circulatory System—								
Cardiac .....	1	.....	.....	20	26	67	1	115
Aneurism .....	.....	.....	.....	1	.....	5	.....	6
Apoplexy .....	.....	.....	.....	1	.....	.....	.....	1
Diseases of the Digestive System—								
Cirrhosis .....	.....	.....	.....	2	.....	2	.....	4
Hydatids .....	.....	.....	.....	.....	.....	2	.....	2
Diarrhœa .....	.....	.....	.....	3	.....	30	.....	33
Non-venereal Diseases of the Genito-urinary System—								
Chronic Nephritis.....	.....	.....	.....	1	.....	40	.....	41
Senility .....	1	1	.....	42	64	61	.....	169
Diseases of Respiratory System—								
Asthma .....	.....	.....	.....	3	.....	.....	.....	3
Bronchitis .....	.....	.....	.....	4	9	39	.....	52
Pneumonia .....	1	.....	.....	4	.....	8	.....	13
Pleurisy .....	.....	.....	.....	.....	.....	1	.....	1
Violence—								
Suicidal .....	.....	.....	.....	.....	.....	.....	.....	.....
Accident .....	.....	.....	.....	.....	.....	3	.....	3
-	3	4	.....	164	133	590	138	1,032

No. 7.—NATIONALITY of Inmates sheltered in Asylums on 31st December, 1914.

	Cottage Homes.	George-street.	Liverpool.	Maequarie-street.	Newington.	Rookwood.	Waterfall.	Total.]
New South Wales .....	2	35	117	36	282	353	159	984
Other States .....	.....	12	34	12	37	98	35	228
New Zealand.....	.....	2	4	1	6	10	3	26
England .....	11	98	164	78	164	395	93	1,006
Scotland .....	1	29	42	17	41	129	23	282
Ireland .....	7	50	123	32	177	209	53	656
Wales .....	.....	3	9	1	4	10	2	29
Canada .....	.....	5	6	.....	1	5	1	17
United States of America...	.....	3	4	1	2	6	1	17
South Africa .....	.....	.....	2	.....	1	1	.....	3
Germany .....	.....	4	11	3	4	25	3	50
Belgium and Holland .....	.....	.....	2	.....	.....	3	.....	5
Austria .....	.....	.....	.....	.....	.....	1	.....	1
Spain and Portugal.....	.....	.....	.....	.....	.....	1	.....	1
Russia .....	.....	.....	4	1	.....	6	1	12
Sweden .....	.....	3	6	.....	.....	15	4	28
Norway .....	1	.....	3	1	.....	8	1	14
Denmark .....	.....	2	8	.....	.....	6	2	18
Switzerland .....	.....	3	2	1	1	2	.....	9
Italy .....	.....	.....	1	.....	.....	5	.....	6
Nova Scotia .....	.....	.....	.....	.....	.....	2	.....	2
Greece .....	.....	.....	.....	.....	.....	3	.....	3
Malta .....	.....	1	.....	.....	.....	.....	.....	1
India .....	1	2	5	.....	2	6	2	18
Brazil .....	.....	.....	.....	.....	.....	.....	.....	.....
France .....	.....	4	9	1	4	9	1	28
Born at Sea .....	.....	.....	2	.....	2	2	.....	6
Asiatic .....	.....	5	26	.....	1	9	.....	41
Unclassified .....	.....	4	6	1	4	10	2	27
Total .....	23	265	590	186	732	1,328	394	3,518

No. 8.—RETURN showing the number of Inmates in the State Hospitals and Asylums on the 31st December, 1914, who have been resident in this State less than five years.

Institution.	Under 1 year.	Under 2 years.	Under 3 years.	Under 4 years.	Under 5 years.	Total.
Cottage Homes .....	.....	.....	2	.....	.....	2
George-street Asylum .....	1	1	3	4	2	11
Liverpool State Hospital and Asylum .....	8	7	11	6	7	39
Maequarie-street Asylum .....	2	1	1	1	.....	5
Newington State Hospital and Asylum .....	1	2	3	3	3	12
Rookwood State Hospital and Asylum .....	20	9	18	15	9	71
Waterfall Sanatorium .....	5	9	11	24	13	62
Total .....	37	29	49	53	34	202

No. 9.—RETURN showing the Ages of Hospital Patients in the different Asylums on 31st December, 1914.

Institution.	Under 20.	20 to 30.	31 to 40.	41 to 50.	51 to 60.	61 to 70.	71 to 80.	81 to 90.	91 to 100.	Over 100.	Total.
Cottage Homes .....	...	...	...	...	...	...	...	...	...	...	...
George-street Asylum ...	...	...	...	...	...	...	...	...	...	...	...
Liverpool State Hospital and Asylum.	2	21	19	26	55	73	85	41	3	1	326
Maequarie-street Asylum .....	...	...	...	...	...	...	...	...	...	...	...
Newington State Hospital and Asylum.	6	9	15	41	58	49	83	47	8	...	316
Rookwood State Hospital and Asylum.	4	14	54	103	143	157	128	57	9	...	669
Waterfall Sanatorium ...	32	75	83	72	40	13	1	...	...	...	316
Total .....	44	119	171	242	296	292	297	145	20	1	1,627

**STATE HOSPITALS AND ASYLUMS FOR THE INFIRM.**  
**DETAILED STATEMENT of Expenditure for the year ended 31st December, 1914.**

Institutions.	Cottage Homes for Aged Couples.	George-street Asylum.	Liverpool State Hospital.	Macquarie-street Asylum.	Newington State Hospital.	Rookwood State Hospital.	Waterfall Sanatorium.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Average daily population .....	27	262	590	186	755	1,321	392	3,533
Rations .....	276 14 3	1,853 12 6	6,135 2 9	4,014 9 8	5,369 5 2	13,480 10 5	5,513 2 7	36,642 17 4
Alcohol .....	2 6 4	.....	374 15 1	8 17 8	369 5 2	206 13 7	9 16 7	665 6 0
Drugs .....	.....	2 15 11	720 13 0	5 6 7	706 3 6	1,885 18 5	261 14 9	3,582 12 2
Disinfectants .....	.....	7 11 1	24 11 3	23 3 4	14 11 5	17 14 8	26 16 3	114 8 0
Fuel .....	7 15 11	105 0 5	541 12 5	347 18 1	777 11 7	2,165 15 1	344 12 9	4,290 6 3
Light .....	31 15 0	80 17 5	258 17 2	75 15 11	71 6 7	33 19 2	272 8 5	824 19 8
Water .....	10 0 0	128 13 1	.....	54 12 0	10 2 7	157 8 1	164 8 11	525 4 8
Burials .....	.....	1 11 0	90 16 2	.....	47 14 6	186 11 6	16 0 0	342 13 2
Hardware .....	1 5 0	218 19 5	172 7 6	37 8 3	225 5 8	613 12 0	307 8 4	1,576 6 2
Clothing .....	27 0 2	261 4 10	1,311 3 4	333 9 8	1,382 19 5	2,303 18 2	236 11 6	5,862 7 1
Food .....	.....	81 0 11	134 0 3	7 7 9	1,974 11 6	1,996 0 5	309 19 1	4,502 19 11
Poultry.....	.....	109 17 10	.....	.....	.....	37 0 1	.....	146 17 11
Horses, Cows, and Pigs .....	.....	.....	109 7 6	.....	.....	.....	.....	109 7 6
Insurance, Telephone, and Postal Services .....	.....	27 9 2	.....	.....	.....	.....	102 3 1	129 12 3
Postage and Stationery .....	1 4 2	19 1 8	50 6 10	9 5 5	38 13 1	126 2 5	26 6 10	271 0 5
Sundries .....	16 19 2	36 7 2	255 8 1	8 1 6	232 6 7	270 2 11	124 2 8	943 8 1
Petty Cash .....	7 11 1	38 14 11	39 18 6	14 2 5	43 13 4	77 5 3	44 13 5	263 18 11
Salaries and Wages .....	210 2 11	1,178 11 11	7,017 4 5	1,870 1 5	5,593 3 1	11,208 11 3	6,065 9 2	33,144 4 2
Stock on hand, 31st December, 1913 .....	592 14 0	4,151 9 3	17,236 4 3	6,809 19 8	16,550 4 9	34,773 3 5	13,826 14 4	93,940 9 8
..... Add	63 11 8	414 6 7	1,604 9 10	662 17 10	2,980 6 3	2,895 4 4	2,003 11 9	10,534 8 3
Stock on hand, 31st December, 1914 (Revenue Collections).....Deduct	656 5 8	4,565 15 10	18,840 14 1	7,472 17 6	19,530 11 0	37,578 7 9	15,830 6 1	104,474 17 11
..... Deduct	105 7 10	590 17 10	3,906 0 3	830 17 2	5,158 1 6	6,355 11 1	2,161 6 8	19,108 2 4
Exchange adjustments .....	550 17 10	3,974 18 0	14,934 13 10	6,642 0 4	14,372 9 6	31,222 16 8	13,668 19 5	85,366 15 7
..... Add	289 5 7	754 14 0	747 5 1	183 13 10	1,254 11 1	2,490 19 2	1,068 3 8	6,698 12 5
Exchange adjustment .....	840 3 5	4,729 12 0	15,081 18 11	6,825 14 2	15,627 0 7	33,623 15 10	14,737 3 1	92,065 8 0
..... Deduct	.....	268 3 10	28 9 3	3,836 16 5	1,841 16 1	1,295 3 1	302 6 8	7,572 15 4
Rent, repairs, furniture, building, rail, and other expenses .....	840 3 5	4,461 8 2	15,053 9 8	2,988 17 9	13,785 4 6	32,328 12 9	14,434 16 5	84,492 12 8
.....	25 13 7	154 7 2	878 12 2	396 16 2	714 9 0	1,660 2 2	666 12 4	4,196 12 7
Salaries and Expenses, Administrative Office .....	865 17 0	4,615 15 4	16,532 1 10	3,385 13 11	14,499 13 6	33,988 14 11	15,101 8 9	88,989 5 3
.....	11 9 3	111 4 9	259 9 10	78 19 5	320 11 0	560 17 2	166 8 7	1,500 0 0
Cost per inmate .....	877 6 3	4,727 0 1	16,782 11 8	3,464 13 4	14,820 4 6	34,549 12 1	15,267 17 4	90,489 5 3
.....	32 9 10	18 0 10	28 8 10	18 12 6	19 12 7	26 3 1	38 18 11	25 12 3





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PART V.

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Fifth Report of the Microbiological Laboratory (Government  
Bureau of Microbiology) for the year 1914.

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## PART V.

# Fifth Report of the Microbiological Laboratory (Government Bureau of Microbiology) for the year 1914.

The Principal Microbiologist to The Director-General of  
Public Health.

Microbiological Laboratory,  
Department of Public Health, Sydney, 1 December, 1915.

Sir,

I have the honor to submit for your information the accompanying report of the Microbiological Laboratory dealing with the work performed during the year 1914.

Whilst the first seven months of the year passed in ordinary routine fashion, still showing a consistent increase in the number of examinations required from the Laboratory, the onset of war at the beginning of August at once placed a greatly increased burden of work on members of the staff. Shortly after the declaration of war the preparation of anti-typhoid vaccine was commenced on a large scale for the protection of troops leaving Australia. The anti-typhoid vaccine supplied to the troops leaving for New Guinea and to the first body of troops from all parts of Australia leaving for Egypt was supplied by the Laboratory. Later on vaccine was only supplied for the requirements of the troops leaving Queensland and New South Wales, with occasional supplies to those from other States. Not only did the staff of the Laboratory supply the large amounts of anti-typhoid vaccine required, but nearly all the actual inoculations carried out in New South Wales during 1914 were performed by them. In addition, the staff also vaccinated a large number of the military with calf lymph. It can be readily understood that under these circumstances of stress, the higher work of the Laboratory, consisting of investigating the nature of various diseases and of devising means for the protection of the public health, has had to a great extent to be thrust on one side to make way for the routine demands of the moment. It cannot be too much emphasised that the chief work of a State Microbiological Laboratory should be of an investigational character, ensuring at the same time, however, due attention to all routine requirements. The shortage in the professional staff it is hoped will be remedied at the conclusion of the war so as to give effect to the former aspect.

During the middle of the year Dr. G. Keith Smith was temporarily appointed to assist in the work of the Laboratory, but shortly after the declaration of war, when strict economy had to be practised, his services had unfortunately to be dispensed with.

I have again much pleasure in expressing my thanks to the whole staff for the cordial and able way in which the war emergency was met. It is very gratifying to know that not only were all these extra claims fully met, but the routine work of the Laboratory in no way suffered thereby. It is right to point out that this was only accomplished by the staff working overtime to a very considerable extent for which they received absolutely no reward beyond feeling that they had done their duty in a national crisis.

The clerical staff are also to be congratulated in maintaining their previous high degree of efficiency, and on the careful and correct way in which many highly technical scientific terms were taken down in shorthand and typed, thus allowing of the dictation of reports which very materially lessens the labours of the professional officers.

I have, &c.,  
J BURTON CLELAND,  
Principal Microbiologist.



## PREFACE

It is unnecessary to indicate again the nature and scope of the operations of the Microbiological Laboratory, these having been set forth in the earlier reports. The present report is, unfortunately, very short, containing but the merest details of the work performed during the year. Through undermanning of the professional staff it has been found impossible to deal with a number of subjects which should have been more fully considered during the year in the present report. These, however, have not been overlooked, but will be incorporated, when time permits, in succeeding reports.

Part I of the present report consists of details of the routine work performed. In Part II are incorporated such points of interest and importance as seem advisable to be made public for the advancement of scientific medicine. In Division I various diseases due to microbic action are dealt with. In Division II various other pathological conditions of animals are dealt with, only one item, however, appearing in this report. Division III deals with animal parasites. Time has not permitted dealing with any subjects under Division IV, Hygienic Examinations, or under Division V, Economic Examinations; or under Division VI, General, which includes various subjects of medical interest, more especially in connection with the history of disease in Australia.

## STAFF.

*Staff of the Microbiological Laboratory.*

Principal Microbiologist: JOHN BURTON CLELAND, M.D., Ch.M. (Syd.), Cert. Lond. School of Trop. Med., Fellow Roy. Soc. Med., Fellow Incorp. Soc. M.O.H., Fellow of the Society of Tropical Medicine and Hygiene, &c.

Assistant Microbiologists: EUSTACE W. FERGUSON, M.B., Ch.M. (Syd.); GERALD KEITH SMITH, M.B. (Syd.)

Laboratory Assistants: Robert Grant (Senior Assistant), George Gordon Grant, Austin Burton Duffy, John Owen Sergeant, William Alexander Thomson.

Laboratory Attendants: Harry Aldrich Gotto, Neil Maxwell McDonald, Arthur James Williamson.

Clerical Staff: Florence Stuart Wearne, Clerk; Bessie Dobson Prince, Typiste and Shorthand-writer; Florence Mary Black, Typiste and Shorthand-writer; James Flynn, Messenger.

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Staff of the Microbiological Laboratory .....	169

## PART I.

Statement of routine work performed by the Bureau during the year 1914. Microbiological examinations. Pathological examinations. Parasites. Medico-legal examinations. Examination of rats. Cultures and materials prepared and issued. Vaccines prepared and issued. Butter starters issued. Miscellaneous issues .....	170
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## PART II.

## REPORTS OF INVESTIGATIONAL WORK.

*Division I.—Infectious Diseases of Animals (including Man).*

1. Researches on Plague. (J. B. Cleland) .....	174
2. (a) Routine Examinations for Typhoid Fever. (E. W. Ferguson) .....	176
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6. Vaccines. (J. B. Cleland and E. W. Ferguson) .....	188
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*Division III.—Parasites of Animals.*

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12. Notes on Mosquitoes. (E. W. Ferguson) .....	203
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14. Pollen Grains (?) in the Lung of a Child. (J. B. Cleland) .....	206

## PART I.—ROUTINE WORK.

## STATEMENT CONCERNING ROUTINE WORK.

Department of Public Health—		
Head Office .....	3,655	
Coast Hospital .....	524	
David Berry Hospital .....	2	
Liverpool State Hospital and Asylum .....	87	
Newington „ „ „ „ .....	14	
Rookwood „ „ „ „ .....	859	
		5,141
Commonwealth Government .....		3,760
Department of Agriculture .....		94
„ Chief Secretary (Fisheries Branch).....		10
„ Police.....		48
„ Prisons .....		217
„ Public Instruction .....		7
„ Railways .....		16
„ State Children's Relief .....		41
„ Stores Supply .....		5
Public Hospitals and Institutions .....		1,164
		10,503
Examination of rats for Plague—		
Department of Public Health.....	2,214	
City Council of Sydney .....	6,128	
Other sources .. .....	1,057	
		9,439
Total.....		19,942

## A.—Microbiological Examinations.

## 1. Of material from diseased persons and animals for :—

Abscess .....	1	Mastitis (Bovine) .....	86
Acne .....	10	Meningitis .....	11
Actinomycosis .....	5	Osteo-arthritis (Chronic) .....	1
Anæmia (Pernicious) .....	4	Plague .....	3
Ankylostoma .....	2	Pneumonia .....	11
Anthrax .....	6	Pseudo-tuberculosis (Ovine) .....	2
Bacilluria, Pyelitis and Cystitis .....	71	Pyorrhœa alveolaris .....	5
Bilharziasis .....	1	Ringworm .....	3
Bronchiectasis .....	5	Septicæmia .....	27
Bronchitis (Chronic) .....	2	Septic conditions.....	118
Catarrh (Chronic) .....	3	Swine fever ....	1
Diphtheria .....	5,246	Syphilis.....	642
Empyema .....	16	Tetanus.....	1
Endocarditis .....	1	Tuberculosis.....	1,670
Ethmoidal catarrh .....	1	Tuberculosis (Bovine) .....	8
Filaria .....	2	Typhoid fever .....	614
Furunculosis .....	23	Typhoid (Widal tests after anti-typhoid	
Gonorrhœa .....	134	inoculations).....	90
Hydatids .....	5	Variola .....	8
Leprosy.....	9	Unclassified .....	12
Malaria .....	4		
Malignant œdema .....	1	Total .....	8,865

The number of examinations under this heading is slightly less than the number for 1913, namely 9,264, though considerably greater than that for 1911, 2,768, and 1912, 5,069. The decrease as compared with 1913 chiefly lies in the number of diphtheria swabs examined, which have fallen from 6,129 to 5,246. The cases of bovine mastitis have also decreased from 573 to 86. On the other hand, tuberculosis has increased from 1,119 to 1,670; gonorrhœa, from 96 to 134; typhoid fever, from 423 to 614; and syphilis, from 413 to 642.

*Actinomycosis*.—Three specimens were submitted from two supposed human cases of this disease, both of which proved negative.

*Ankylostoma*.—Two specimens examined for this worm were both negative.

*Anthrax*.—Four specimens from three supposed human cases of malignant pustule, and organs from a pig and from an ostrich chick in which anthrax was suspected, all proved negative.

*Bilharziasis*.—*Bilharzia* ova were detected in the urine of an old soldier who had served in the Boer war, and had suffered from this infection ever since.

*Filaria*.—Two specimens were received for examination for filaria, one consisting of chylous urine, and the other of blood films. Both proved negative.

*Hydatids*.—In two cases laminated hydatid membrane was received, having been coughed up by a patient. Several sputa were examined for the possible presence of hydatid scolices, but all proved negative. A retro-peritoneal cyst which was submitted for examination also proved not to be due to hydatid disease.

*Leprosy*.—The nine specimens examined came from seven different cases. Four specimens from three cases showed the presence of leprosy bacilli, and five specimens from the other four cases did not show the presence of these organisms. In only three cases were the specimens submitted for diagnostic purposes; of these two specimens from one case showed the presence of leprosy bacilli, and three specimens from two other cases did not show their presence.

*Malaria*.

*Malaria*.—Four cases examined during the year all proved negative.

*Meningitis*.—Of the cases of meningitis submitted, two were cases of infection by a member of the influenza group of organisms and two were due to pneumococcal infections. Of the other cases, in two instances Gram negative intracellular *Diplococci*, probably the *Meningococci*, were detected in smears, but failed to grow on cultures, probably owing to the specimens having been long in transit before reaching us. *Streptococci* were detected in one case. Tubercle bacilli, though searched for in nearly every instance, were not detected.

*Plague*.—Three cases considered as being possibly Bubonic Plague all proved negative.

*Ringworm*.—Scales and hairs from a human case did not reveal the parasite. In an outbreak amongst calves in which large scurfy raised patches occurred scattered over the surface, ringworm "spores" were numerous.

## 2. Of Materials and Apparatus :—

Almonds (parcels).....	1	Lacto-bacilline tablet .....	1
Anaphylaxis (Guinea-pig) .....	1	Meat .....	1
Anti-gonococcal vaccine .....	1	Milk .....	7
Antisera, animal injections.....	21	Milk (condensed) .....	4
Asbestos, Testing absorptive power of ...	3	Milk (Rutter process experiments) .....	17
Butter (for Tuberculosis) .....	12	Oysters (parcels) .....	9
Calf lymph.....	1	Plants .....	2
Canine distemper serum .....	1	Rain-water.....	1
Cholera cultures (virulence) .....	1	Sera .....	2
Cholera and dysentery vaccines .....	1	Specimens (various from Antarctica) .....	18
Disinfectants .....	9	Supposed Red-water cure .....	1
Ferguson's composite culture of nitrogen-fixing bacteria .....	1	Test-meal .....	2
Filters.....	2	Tinned Ox tongue.....	1
Formalin tabloid .....	1	Tinned Pears.....	1
"Frutum" .....	1	Water .....	4
Fungi (testing poisonous properties) .....	1	Whip-snake venom, effect on guinea-pigs. ....	1
Growth from water tank.....	2		
Haddock (smoked) .....	1		132

## B.—Pathological Examinations.

Of Animals :—	
Mammals .....	1
Birds .....	4
Of Body Fluids, Tissues, &c. :—	
Blood for differential count .....	32
Fæces .....	7
Gallstones .....	1
Tissues :	
Human .....	35
Animal .....	19
Tumours :	
Malignant .....	85
Non-malignant .....	153
Indefinite .....	34
Urine .....	155
	526

## C.—Examination of Parasites.

Of ecto-parasites (fleas, ticks, mites, &c.) ...	845
Endo-parasites (worms, &c.) .....	7
Worm nests in cattle : Examination of flies and mosquitoes for <i>Onchocerca gibsoni</i> ...	73
	925

## D.—Medico-legal Examinations.

Exhibits (parcels) for Blood Stains .....	12
" " " Seminal Stains .....	38
" " " Spermatozoa and Gonococci .....	2
" " " other examinations. ....	2
Contents of stomach of child .....	1
	55

## SUMMARY.

Microbiological examinations .....	8,865
Materials and apparatus .....	132
Pathological examinations.....	526
Medico-legal examinations .....	55
Examination of parasites .....	925
Examination of rats for plague.....	9,439
	19,942

## 1. CULTURE MEDIA PREPARED.

Agar : Bile Salt .....	609	Litmus peptone—(continued).	
" Glucose .....	1,102	Inulin litmus peptone .....	714
" Glycerine veal .....	712	Lactose " .....	2,519
" Nutrient .....	27,264	Maltose " .....	714
Blood Serum .....	21,397	Mannitol " .....	2,519
Dorset's Egg Media .....	730	Raffinose " .....	714
Gelatine .....	907	Saccharose " .....	2,519
Litmus peptone—		Salicin " .....	714
Adonitol litmus peptone .....	714	Sorbitol " .....	714
Amygdalin " .....	714	Milk : Litmus milk .....	1,620
Arabinose " .....	644	" Ordinary milk .....	2,307
Dextrin " .....	714	Nutrient Broth .....	2,053
Dulcitol " .....	2,519	Potato slopes .....	84
Erythrite " .....	714	Water : Peptone water .....	1,725
Galactose " .....	714	" Sterile tap water .....	84
Glucose " .....	2,519		
Glycerine " .....	175		80,748



## 2. CULTURE MEDIA ISSUED.

To whom issued.	Description.	Quantity.
Armidale Hospital.....	Blood serum .....	36 tubes.
Broken Hill Hospital.....	Carbonate broth.....	1 bottle.
Coast Hospital.....	Agar .....	24 tubes.
	Blood serum .....	1,560 "
	Broth .....	144 bottles.
	Glucose litmus peptone .....	3 tubes.
	Lactose " " .....	3 "
	Mannitol " " .....	3 "
	Ox bile .....	3 "
	Water gelatine .....	24 "
Commonwealth Government—		
Garrison Hospital, Victoria Barracks	Agar .....	6 "
	Blood serum .....	18 "
Captain Bean, A.A.M.C. ....	Blood serum .....	25 "
Captain Norris, A.A.M.C. ....	Agar .....	5 "
	Broth .....	36 bottles.
Captain Wiley, A.A.M.C. ....	Blood serum .....	30 tubes.
H.M.A.S. "Tingira" .....	Blood serum .....	18 "
Department of Public Health, Western Australia .....	Anti-human serum and control .....	1 "
Department of Public Instruction .....	Blood serum .....	444 "
	Agar .....	6 "
Dubbo Hospital .....	Blood serum .....	12 "
Junee Hospital .....	Agar .....	12 "
	Blood serum .....	12 "
Lewisham Hospital.....	Blood serum .....	72 "
Medical Officer of Health, Newcastle....	Agar .....	42 "
	Blood serum .....	253 "
Medical Practitioners.....	Agar .....	12 "
	Blood serum .....	60 "
	Broth .....	14 bottles.
Parramatta Hospital .....	Broth .....	3 "
Rookwood State Hospital, Lidcombe....	Agar .....	12 tubes.
	Broth .....	1 bottle.
Renwick Hospital for Infants .....	Blood serum .....	12 tubes.
St. George Cottage Hospital.....	Broth .....	1 bottle.
Wagga Wagga Hospital .....	Agar .....	108 tubes.
	Blood serum .....	180 "
Women's Hospital, Crown-street .....	Agar .....	12 "
	Broth .....	14 bottles.
Wyalong Hospital .....	Blood serum .....	216 tubes.

## 3. BACTERIOLOGICAL MATERIALS ISSUED.

To whom issued.	Description.	Quantity.
Armidale Hospital .....	Throat swabs .....	60
Balmain Hospital .....	" .....	156
	Widal pipettes .....	36
Bathurst Hospital .....	Throat swabs .....	30
Botanic Gardens.....	Alcoholic solution of mercury perchloride .....	1,000 c.c.
Coast Hospital.....	Widal pipettes .....	36
Commonwealth Government—		
Garrison Hospital, Victoria Barracks	Test tubes .....	6
	Throat swabs .....	18
Commonwealth Medical Officer .....	" .....	6
Garden Island .....	" .....	396
H.M.A.S. "Penguin" .....	" .....	112
H.M.A.S. "Tingira" .....	" .....	658
Administrative Offices, Canberra ....	" .....	36
	Wooden cases for cults. ....	12
Major Millard, A.A.M.C.....	Widal pipettes .....	300
Captain Bean, A.A.M.C.....	Throat swabs .....	25
Captain McKenzie, A.A.M.C.....	" .....	12
Captain Wiley, A.A.M.C. ....	" .....	30
Royal Military College, Duntroon ...	" .....	3,050
	Widal pipettes .....	24
Deaf, Dumb, and Blind Institution .....	Wassermann tubes.....	20
Department of Public Instruction .....	Throat swabs .....	204
Junee Hospital .....	" .....	36
Lewisham Hospital.....	" .....	12
Medical Officer of Health, Newcastle.....	Leishman's stain .....	1
	Loeffler's methylene blue.. ..	1
	Microblotters .....	1,000
	Neisser's stain.....	2 oz.
	Throat swabs .....	30
	Widal pipettes .....	48
Medical Practitioners in private practice	Throat swabs .....	206
	Widal pipettes .....	80
Parramatta Hospital .....	" .....	36
Prisons Department .....	Microslides .....	72
	Throat swabs .....	12

## 3. BACTERIOLOGICAL MATERIALS ISSUED—continued.

To whom issued.	Description.	Quantity.
Railway Department .....	" .....	6
Randwick Asylum .....	" .....	18
Rookwood State Hospital, Lidcombe.....	Test tubes .....	36
	Throat swabs .....	12
State Children Relief Depôt.....	" .....	48
Stock Department .....	Test tubes .....	48
	Sterile swabs .....	6
Sydney Medical Mission .....	Throat swabs .....	132
Tidswell, Dr. F. ....	Toisson's fluid.....	1
Wagga Wagga Hospital .....	Throat swabs .....	6
Wellington Hospital .....	" .....	36
Wyalong Hospital .....	" .....	168

## 4. VACCINES PREPARED AND ISSUED.

Anti-typhoid vaccine (54,089 c.c.) .....	107	Mixed vaccines .....	21
<i>Bacillus acidi lactici</i> .....	1	<i>Pneumococcus</i> .....	2
" <i>pyocyaneus</i> .....	3	" (stock) .....	1
<i>Coccobacillus</i> .....	4	<i>Staphylococci</i> .....	2
" (? <i>Staphylococcus</i> ) .....	2	<i>Staphylococcus albus</i> .....	12
Coliform bacillus .....	87	" <i>aureus</i> .....	65
Diphtheroid bacillus .....	6	Stock acne bacillus.....	5
<i>Diplococcus</i> .....	4	<i>Streptococcus</i> .....	45
Fluorescent bacilli .....	1	<i>Streptococcus mastitidis</i> (bovine) (1,340 c.c.)	23
<i>Micrococcus catarrhalis</i> .....	2		
<i>Micrococcus</i> .....	1		394

## 5. LACTIC BACTERIA (Butter starters, &amp;c.,) ISSUED.

To whom issued.	Quantity.
Bean, Dr. ....	30
Berry Stud Farm .....	12
Black, Mr., Mogg's Swamp .....	4
Bradley, Dr. Burton, Sydney University .....	1
Bridges, R. E., Belmore.....	2
Professor Cooke, Sydney University .....	52
Elliott, Arthur, Myrtle Creek .....	2
Gallagher, R., Guyra .....	8
Griffin, Alderman .....	12
Handebo, Mr., Llangothlin .....	25
Johnstone, Mr. R., Llangothlin .....	11
Moore, Giles, Guyra .....	29
Pinchin, Mr.....	5
Pryor, Mr., Tubbamurra .....	4
Renwick Hospital for Infants .....	15
Royal Hospital for Women .....	2
Spendley, Mr. H., Epping.....	48
Stevenson, Mr., Guyra .....	11
Sydney Hospital .....	1
	274

## 6. MISCELLANEOUS ISSUES OF CULTURES AND SERUMS.

To whom issued.	Description.
Bull, Dr. (Melbourne University)...	<i>M. melitensis</i> .
Bradley, Dr. Burton .....	<i>B. of acne</i> , <i>B. prodigiosus</i> , <i>B. typh.</i> (4 strains), <i>B. dysenteriae</i> , Flexner, <i>B. dysenteriae</i> , Shiga, <i>B. paratyph.</i> , A. and B., B. Morgan No. 1, <i>B. enteritidis</i> , Gaertner, <i>B. enteritidis</i> , Aertryck.
Blackburn, Dr. ....	<i>B. paratyph.</i> A. and B., Schott.
Finckh, Dr. A. E. ....	<i>B. typhosus</i> .
Flashman, Dr. F. ....	<i>B. prodigiosus</i> , <i>B. typhosus</i> , L.I.P.M.
Royal Prince Alfred Hospital (Dr. Tebbutt).	<i>B. typhosus</i> , L.I.P.M., <i>B. anthracis</i> , <i>B. dysent.</i> , Shiga, <i>B. dysent.</i> , Flexner, <i>B. melitensis</i> .
Shearman, Dr. C. ....	<i>B. paratyph.</i> , A. and B., <i>B. typhosus</i> , <i>B. of acne</i> .
Smith, Dr. Walton .....	<i>B. acidi-lactici</i> , <i>B. typhosus</i> .
Sydney Hospital .....	Human, bovine, equine, and avian tubercle bacilli.
Sydney University (Dr. Barling)...	<i>B. anthracis</i> .
Tidswell, Dr. F. ....	<i>B. acidi-lactici</i> , <i>B. dysenteriae</i> , Flexner, <i>B. dysenteriae</i> , Shiga, <i>B. paratyph.</i> , A. and B., Schott, <i>Strepto. of Mastitis</i> (bovine), <i>B. typhosus</i> .
Wallas, Mr. T. I. ....	<i>B. prodigiosus</i> .
Welsh, Prof. (Sydney University)...	<i>B. enteritidis</i> , Aertryck, <i>B. enteritidis</i> , Gaertner, <i>B. dysenteriae</i> , Flexner, B. Morgan's No. 1, <i>B. paratyph.</i> , A. and B., Schott.
Commonwealth Government (Capt. Norris, A.A.M.C.).	<i>B. typhosus</i> .

## PART II.—REPORTS OF INVESTIGATIONAL WORK.

## DIVISION I.—Infectious Diseases of Animals (including Man).

## 1. RESEARCHES ON PLAGUE.

(J. B. Cleland and E. W. Ferguson.)

In connection with routine measures taken for the detection of the presence of plague and the prevention of its spread, 9,439 rats and mice were examined during 1914. Plague was not found in any of the specimens, thus leaving a plague-free period from April, 1910. Dr. E. W. Ferguson, who joined the staff in June, 1913, undertook the determinations of the ecto-parasites of rats from the date Mr. Darnell Smith severed his connection with the Department 1st July, 1913.

## ECTO-PARASITES COLLECTED FROM RODENTS.

Week ending--	No. of rodents examined.	No. infected with plague.	Insecta.												Gamaside.
			Diptera Siphonaptera (Fleas.)						Hemiptera.		Coleoptera (Beetles.)			Hymenoptera, ants, &c.	
			Lamprosylla cheopis.	Ctenopsylla musculi.	Ceratophyllus fasciatus.	Ctenocephalus canis and felis.	Pulex irritans.	Total Fleas.	Hematompinus, &c. (Lice.)	Cimex, &c. (Bugs.)	Calandra oryze. (Weevils.)	Cucujida.	Other beetles.		
1914.															
10 Jan.	170	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17 Jan.	258	...	...	...	...	...	...	...	...	...	...	...	...	...	...
24 Jan.	271	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31 Jan.	125	...	25	5	2	...	...	32	...	...	...	...	...	...	2
7 Feb.	219	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14 Feb.	258	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21 Feb.	206	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28 Feb.	153	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7 Mar.	154	...	8	...	...	...	...	8	...	...	...	...	...	2	...
14 Mar.	108	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21 Mar.	158	...	...	...	...	...	...	...	...	...	...	...	...	...	...
28 Mar.	151	...	21	2	...	...	...	23	...	...	...	...	...	...	1
4 April	180	...	1	3	...	...	...	4	...	...	...	...	...	...	...
11 April	101	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18 April	137	...	32	...	...	...	...	32	...	...	...	...	...	...	...
25 April	145	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 May	285	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9 May	176	...	...	...	...	...	...	...	...	...	...	...	...	...	...
16 May	184	...	...	...	...	...	...	...	...	...	...	...	...	...	...
23 May	168	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30 May	166	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6 June	144	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13 June	132	...	...	...	...	...	...	...	...	...	...	...	...	...	...
20 June	177	...	...	...	...	...	...	...	...	...	...	...	...	...	...
27 June	215	...	...	2	...	...	...	2	20	...	...	...	...	...	1
4 July	136	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11 July	132	...	...	...	...	...	...	...	...	...	...	...	...	...	...
18 July	120	...	12	2	1	...	...	15	...	...	...	...	...	...	...
25 July	220	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 August	265	...	9	13	4	...	...	26	...	...	...	...	...	...	20
8 August	184	...	3	...	...	...	...	3	...	...	...	...	...	...	...
15 August	231	...	2	27	...	...	...	29	...	...	...	...	...	...	...
22 August	193	...	...	...	...	...	...	...	...	...	...	...	...	...	...
29 August	162	...	7	4	2	...	...	13	50	...	...	...	...	...	6
5 September	194	...	7	28	6	...	...	41	...	3	...	...	...	...	1
12 September	216	...	5	1	16	...	...	22	...	...	...	...	...	...	...
19 September	195	...	...	7	3	...	...	10	...	...	...	...	...	...	...
26 September	222	...	2	12	2	...	...	16	...	...	...	2	...	...	...
3 October	255	...	3	10	2	...	...	15	...	...	4	...	2	...	...
10 October	109	...	23	33	9	...	...	65	...	...	...	...	2	...	...
17 October	362	...	9	128	3	1	...	141	...	...	...	1	...	...	7
24 October	182	...	11	26	1	...	...	38	...	1	...	...	...	...	2
31 October	176	...	9	37	22	...	...	68	...	...	...	6	1	...	...
7 November	141	...	2	10	8	...	...	20	...	...	...	...	...	...	...
14 November	172	...	1	9	2	1	...	13	...	...	...	...	...	...	...
21 November	164	...	5	5	4	...	...	14	...	...	...	...	...	...	...
28 November	192	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 December	243	...	11	5	5	...	...	21	...	...	...	...	...	...	...
12 Dceember	220	...	17	...	1	...	...	18	...	...	...	...	...	...	2
19 December	155	...	6	...	1	...	...	7	...	...	...	...	...	...	...
31 December	157	...	2	2	...	...	...	4	...	...	...	...	...	...	...
Total	9,439	...	233	371	94	2	...	700	70	1	7	9	5	2	42



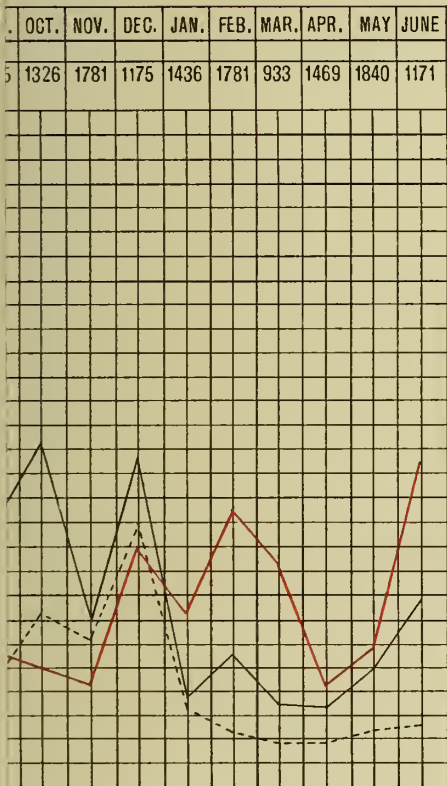
*Species of Fleas*

The fleas collected were determined as belonging to four species—*Xenopsylla* (*Lamopsylla*) *cheopis*, *Ctenopsylla musculi*, *Ceratophyllus fasciatus*, *Ctenocephalus felis* (or *canis*). The human flea, *Pulex irritans*, was not found on any of the rats examined. In contrast to our usual experience, *Lamopsylla cheopis* was less numerous than *Ctenopsylla musculi*, the relative numbers being 233 and 371 out of a total of 700 fleas.

*Number and Seasonal Prevalence of Fleas.*

In the following statement the figures refer to the number of fleas found on the rats examined.

1913



\*Examination of rodents was suspended during the months of August, September, and October owing to the smallpox outbreak.



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*Number and Seasonal Prevalence of Fleas.*

In the following statement the figures referring to the three principal species of rat-fleas collected each month are given in gross, and also expressed as a ratio per 1,000 rats examined. The same data have also been plotted upon the accompanying chart.

Year.	Cases in human beings.	No. of rodents examined.	No. plague infected.	Lamopsylla cheopis.		Ctenopsylla musculi.		Ceratophyllus fasciatus.	
				Gross.	per 1,000 rats.	Gross.	per 1,000 rats.	Gross.	per 1,000 rats.
1914.*									
January	...	824	.....	25	30.33	5	6.06	2	2.42
February	...	836	.....	.....	.....	.....	.....	.....	.....
March	...	661	.....	29	43.87	2	3.02	.....	.....
April	...	726	.....	33	45.45	3	4.13	.....	.....
May	...	726	.....	.....	.....	.....	.....	.....	.....
June	...	708	.....	.....	.....	2	2.82	.....	.....
July	...	753	.....	12	15.93	2	2.65	1	1.32
August	...	885	.....	21	23.72	44	49.71	6	6.78
September	...	953	.....	14	14.69	48	50.35	27	28.33
October	...	923	.....	55	59.58	234	253.52	37	40.08
November	...	728	.....	8	10.98	24	32.96	14	19.23
December	...	716	.....	36	50.27	7	97.76	7	97.76

*Examination of Rats.*

In the first epidemic of plague at Sydney in 1900 and 1902 no record was kept of the actual number of each of the two species of rats—*Mus decumanus* and *Mus rattus*—prevalent, but in the whole collection of 215,286 destroyed there were about as many of one as of the other. *Mus rattus* predominated among those taken along the shores, and *Mus decumanus* among those taken inland. Among those selected for examination the infected specimens were all *Mus decumanus*. The results of the systematic examinations since 1903 are given in the following table:—

Year.	Period of Rat Examination.	Rats examined.				Mice examined.			Infected.								Percentage of infected to total examined.		
		Decumanus.	Per cent.	Rattus.	Per cent.	Musculus.	Per cent.	Total.	Decumanus.	Per cent.	Rattus.	Per cent.	Musculus.	Per cent.	Total.		D.	R	M
1903	1st May to 15th Aug.	rats. 8,695	...	...	...	5,976	...	14,671	rats. 111	...	...	...	mice. 50	...	161	...	...	...	...
1904	1st Mar. to 3rd Dec.	12,169	27.76	8,225	18.76	23,428	53.48	43,822	108	44.26	73	29.92	62	25.41	243	.76	1.16	0.26	
1905	Year.	11,383	53.72	5,681	17.81	14,831	46.47	31,895	78	55.32	45	31.91	18	12.77	141	.79	.88	.13	
1906	"	9,275	31.49	8,694	29.52	11,478	38.97	29,447	46	26.44	89	51.15	39	22.41	174	.49	1.02	.34	
1907	"	8,628	27.2	10,479	33.9	12,244	38.7	31,621	57	26.03	143	65.29	19	8.68	219	.66	1.3	.15	
1908	"	7,622	28.39	9,207	34.29	10,020	37.32	26,849	82	46.86	78	44.57	15	8.57	175	1.075	.84	.14	
1909	"	6,752	25.26	11,259	42.08	8,726	32.66	26,737	22	12.36	138	77.53	18	10.11	178	.32	1.22	2.06	
1910	"	5,708	24.98	10,076	44.15	7,044	30.87	22,821	4	80.	1	20.	...	...	5	.07	.009	...	
1911	"	6,025	26.45	10,830	47.55	5,919	26.	22,774	...	...	...	...	...	...	...	...	...	...	
1912	"	6,510	37.82	7,922	46.18	2,722	16.	17,154	...	...	...	...	...	...	...	...	...	...	
*1913	"	5,020	47.29	5,477	51.59	118	1.1	10,615	...	..	...	...	...	...	...	...	...	...	
1914	"	3,732	39.54	5,487	58.23	220	2.33	9,439	...	...	...	...	...	...	...	...	...	...	
Total	.....	82,817	30.31	93,607	34.22	96,750	35.41	273,174	397	34.98	547	49.96	171	15.06	1,135	.64	0.88	.19	

\*Examination of rodents was suspended during the months of August, September, and October owing to the smallpox outbreak.





## (b) PROTECTIVE INOCULATION AGAINST TYPHOID FEVER.

(J. B. CLELAND.)

WITH the outbreak of war in August, the preparation of anti-typhoid vaccine on a large scale was at once commenced for military purposes. Advantage was taken of the wide-spread notice of this means of protection which the treatment of the soldiers necessarily brought about, to make an effort to encourage protective inoculations in various districts of the State where typhoid fever was more especially prevalent. Through the *Medical Journal of Australia*, medical practitioners were notified that anti-typhoid vaccine could be obtained on application from the Microbiological Laboratory, and they were asked to encourage in every way the practice of inoculation amongst the civil population. Meetings of medical men occurred at various country districts, and offers were made to the public to be so protected. Unfortunately, in many instances very few persons came forward, though through the energy and public spirit of the medical men of Forbes—a district previously one of the most consistent annual sufferers from typhoid fever—over 2,000 people were protected, apparently with excellent results. A summary of the replies from medical practitioners using the anti-typhoid vaccine is appended. Up to the end of the year 47,460 c.c., standardised to 1,000 million typhoid bacilli per c.c., were supplied for military purposes, and 6,260 c.c. for civil purposes. Nearly all of the military prophylactic inoculations in New South Wales, during 1914, were performed by the Laboratory Staff.

*Preparation of Anti-typhoid Vaccine.*—The anti-typhoid vaccine used was prepared from nine different strains of typhoid bacilli from the following sources:—

(1) London, 1899 (not used after two or three brews); (2) London, 1900; (3) Kral, Austria, 1902; (4) Ainslie Walker, England, 1908; (5) Pasteur Institute, 1902; (6) Lister Institute of Preventive Medicine, 1908; (7) isolated from Lismore water supply, N.S.W., 1903; (8) isolated from faeces, patient in Coast Hospital, Sydney, 1912; (9) isolated from faeces, patient in Balmain Hospital, Sydney, 1914.

All these strains were tested before use, and also from time to time during use, and were found always to give the typical "sugar" reactions of *B. typhosus*, viz., glucose, acid; mannitol, acid; dulcitol, no change; lactose, no change; saccharose, no change; sorbitol, acid; arabinose, no change; litmus milk, acid; no indol after four days.

The organisms were grown in series on agar slopes in test tubes, which it was found could be more quickly manipulated than medicine bottles. After incubation for twenty-four hours the growth was scraped off and emulsified in 5 per cent. carbolic acid, and sterilised by heating to 50 degrees C. for one hour. Standardisation was effected by counting the number of organisms present by Wright's method against blood cells. The following directions were issued to accompany the vaccine:—

## DIRECTIONS FOR THE INOCULATION OF ANTI-TYPHOID VACCINE.

THE anti-typhoid Vaccine supplied is standardised to 1,000 million bacilli per c.c. (= 17 minims). The doses recommended are an initial one of 250 million ( $\frac{1}{4}$  c.c. = a little over 4 minims), followed a week later by 500 million ( $\frac{1}{2}$  c.c. = 8½ minims). If possible a third inoculation a week later again is advisable, preferably of 1,000 million, but less if previous reactions have been more severe than usual.

The inoculation can be made into each arm alternately, the area of injection being painted with tincture of iodine beforehand. By means of an all-glass syringe with a platinum iridium needle the amounts can be injected into the loose subcutaneous tissues. If many cases are being done, the needle can be rapidly sterilised in the flame of a spirit lamp.

## SUMMARY OF REPLIES FROM MEDICAL PRACTITIONERS USING ANTI-TYPHOID VACCINE SUPPLIED BY THE MICROBIOLOGICAL LABORATORY.

*Commonwealth Government.*—Liverpool Military Camp:—

A report from Captain Donovan, Officer Commanding the Field Hospital, transmitted through Major Lawes, P.M.O., Liverpool, and Colonel Perkins, P.M.O., 2nd Military District, dated 21st September, 1915, states as follows:—

"There have been no cases of enteric in the field hospital at Liverpool since its inception. Eighty-nine cases in all have been admitted to the hospital with the provisional diagnosis of "inoculation." These consisted of cases presenting themselves on sick parades with slight temperatures within two or three days of inoculation. A very large proportion of these prove to be influenza or measles.

"In my opinion the absence of any cases of enteric in the whole Liverpool camp is ample evidence of the value of anti-typhoid inoculation in reducing the incidence of the disease."

*Armidale.*—Dr. J. A. J. Murray, 14th August, 1915:—

"I only used the vaccine in three cases. Two were protective, in which two inoculations were made at an interval of a week. The first inoculation in both cases produced a slight rise of temperature, and some malaise. The second inoculation seemed to produce no systemic symptoms. Neither of these took typhoid fever. The third case was one of enteric, in which an injection was given during the first few days of the fever. The fever ran its course very mildly, but characteristically.

"The number of inoculated persons was manifestly too small to produce any appreciable effect on the epidemic of typhoid here."



*Broken Hill.*—Broken Hill Hospital, 14th August, 1915—Dr. Birks writes :—

"During the year 1914 thirty-seven persons connected with this hospital were inoculated. One of these, a probationer nurse, contracted typhoid, and died. She was inoculated between 13th April and 2nd May, and died on 14th June, after an illness of between two and three weeks' duration.

"All the persons inoculated here during the year 1914 received 250 million as an initial dose, followed by two doses of 500 millions each at intervals of seven to ten days. Since June of this year we have been giving the larger doses, as recommended by your department, and we have inoculated five persons."

*Coast Hospital.*—Dr. Wallace, on the 16th September, 1915, reports as follows :—

"Anti-typhoid inoculation was commenced at this institution in November, 1914. Sixty-seven nurses, two members of the medical staff, and four attendants were treated. None of these cases developed typhoid fever, nor have the other members of the staff, who for one reason or another, were not inoculated. (Early in 1915 one of three nurses who declined inoculation contracted the disease, and died.)

"The time during which inoculations were done was too limited to draw any conclusions with regard to incidence of the disease."

*Cobar.*—Dr. H. R. Letcher, 16th September, 1915 :—

"In spite of a notice in the local papers, there was very little response to the offer of protective inoculation, partly due to a decrease in population, and partly to the fact that there was very little typhoid fever, and hence the public was not much concerned about preventive inoculation.

"I inoculated the whole of the nursing staff of the Cobar Hospital. The reaction was very severe in two cases only. None of these have been attacked with the disease. In addition to these only a few residents of the town applied to me; and of these none have developed typhoid. So far as I have had experience of it the results have been satisfactory."

*Crookwell.*—Dr. J. H. Macarthur, 15th September, 1915 :—

"There has been practically no typhoid in the district for the past two years. The nurse at the hospital was protected, and did not develop typhoid."

*Dungog.*—Dungog Hospital, 15th September, 1915 :—

The matron, at the request of the medical officer, reported that the vaccine had been used in the case of a patient who had already contracted the disease. Six inoculations were made; the case was a short one and very mild.

*Forbes.*—Dr. P. Broadbent, 15th September, 1915. Anti-typhoid Inoculation in Forbes, 1914-15.

"Owing to an announcement by the New South Wales Department of Public Health in the *Medical Journal of Australia*, in August, 1914, that Forbes was one of the chief typhoid centres of New South Wales, it was decided by the medical men of Forbes to open up with the help of the local Municipal Council a free anti-typhoid inoculation depôt at the Town Hall. Four afternoons a week were set apart for this purpose during a period of two months, beginning on 28th September, 1914, each of the four medical men of the town taking duty one afternoon a week.

"During this period a total of 2,059 people were inoculated, 1,928 receiving three doses, seventy two doses, and sixty-one one dose of the departmental anti-typhoid vaccine. The greatest number inoculated during one afternoon was 450. The doses used were :— For adults over 16, 250, 500, and 1,000 million typhoid bacilli; for children of 5 years, 100, 200, and 400 million typhoid bacilli; and for children over 5 years in proportion to age, or, in some cases, size. On account of the number coming forward each day we found it necessary to form a line which passed first to the clerk's desk, at which the name, age, and dose (after being given) were registered, then to the nurse in attendance, who sterilised the skin just above the elbow with iodine, and finally to the medical man in charge, who injected the vaccine. The syringe used was the ordinary glass hypodermic with a platinum needle, which was passed through the flame of a spirit lamp between each injection.

"At the present time, twelve months afterwards, we are able to see the result of the campaign. The typhoid season in Forbes usually begins in September and ends in May; and, taking the year as beginning on 1st September and ending on 31st August, the number of cases of typhoid reported in the municipality (with a population approximately of 5,000) for the past fourteen seasons has been :—

1901-2	64	1908- 9	66
2-3	192	9-10	45
3-4	57	10-11	46
4-5	61	11-12	47
5-6	37	12-13	71
6-7	76	13-14	75
7-8	34	14-15	27

"This shows a considerable decrease during the past season as compared with previous years, being thirty-seven below the average of the previous thirteen years, and forty-six below the average of the previous two years."

"Of



"Of the twenty-seven cases of typhoid reported during the year, only three had been inoculated; of these, two were very mild cases and one severe.

"The type of disease in the remaining twenty-four cases (uninoculated) was slightly less than of average severity, and, though some were severe, there were no deaths.

"Case 1.—Female, age fourteen, who received three doses of 150, 300, and 600 million respectively. She developed her typhoid within a few days of her last dose, and probably became infected almost immediately after her first dose of vaccine.

"The disease ran a very mild course, and the patient was confined in hospital five weeks.

"Case 2.—Adult female, who received three doses of 250, 500, and 1,000 million respectively.

"This case was reported as typhoid on 1st December, 1914, and probably became infected about the middle of November, one month after the final dose of vaccine. The disease ran a very mild course, the patient being confined to bed one month.

"Case 3.—Adult male, who received three dose of 250, 500, and 1,000 million, was reported on 13th February, 1915, three months after the first dose. The disease ran a very severe the course, the patient being confined in hospital ten weeks."

*Gilgandra*.—Dr. H. Peet, 11th August, 1915:—

"Re anti-typhoid inoculations during 1914, on receipt of the vaccine from your Department I wrote to the Shire council and published the method as widely as possible, and offered to do the inoculations free of charge. The result was disappointing; only seven inoculations were carried out, four of these being of my own household.

"The inoculations were all carried out in accordance with the instructions accompanying the vaccine, and in no case were the reactions unduly severe. There was only one case of typhoid during the year, a patient not inoculated, who recovered. The figures are too small to base any conclusions on, but I am keeping records of all cases."

*Goulburn*.—Dr. R. O. Williams, 21st August, 1915:—

"I regret to say that I found it possible to induce only a few of my patients to undergo the inoculation. In five cases the reaction after the first injection was very severe (pyrexia and severe malaise for three days). None of the few I inoculated have developed enteric fever up to the present date."

*Inverell*.—Dr. W. J. Morton, September 15th, 1915:—

"Only one case offered for inoculation."

*Maitland, East*.—Dr. S. A. Alcorn, 14th August, 1915:—

"So far none of those inoculated by me for prevention of typhoid in 1914 have contracted the disease.

"Method: Three injections at intervals of a week of 125, 250, and 500 millions. A large number were done about March last with two injections of 250 and 500 millions, but the real test of that work will commence about next November, when we look for an outbreak with the rising temperature, and possibly also on account of the gastro-enteric disturbances then prevalent."

*Maitland, West*.—Dr. A. A. King, 21st September, 1915:—

Of the cases inoculated by Dr. A. A. King, none had contracted typhoid up to the above date.

Dr. J. W. Harbison, 29th August, 1915:—

"I am afraid my experience has been too limited to be of much value. I do not know of any cases of anyone contracting typhoid subsequent to inoculation. Latterly we have not had much typhoid, but I am not aware that there has been sufficient anti-typhoid inoculation to justify us in believing that it has been due to the latter. As regards local effect, nothing has been noticed save the ordinary redness. I mean to use it as far as possible, and have already done several members of my own family."

*Manly*.—Dr. G. R. P. Hall, 27th September, 1915:—

"One case only—patient left the district."

*Milthorpe*.—Dr. A. G. Cribb, 11th August, 1915:—

"I regret to say I have not much to report on the matter. Enteric, which was rather prevalent here in the previous summer, did not make its appearance last summer to any extent. It was, therefore, very difficult to induce anyone to be inoculated. I enclose the notes I made at the time the inoculations were done. I am unable to say whether they had any preventive effect. None of those done have contracted the fever since."

*Narrabri*.—Dr. A. J. Park, 16th August, 1915:—

"Only six cases have been inoculated up to this date, these being members of the district hospital staff."

*Newcastle District*.—Dr. Booth-Clarkson, 18th August, 1915:—

"1. I personally have done no inoculation myself, and no anti-typhoid inoculation was done in the Hunter River combined district, except in the military camp, Newcastle, on my advice, in 1914.

"2,

"2. I provided materials for the inoculations at the Newcastle military camp, and I was unofficially informed (without names) that about 100 men, including six officers, were inoculated the first time, about thirty were inoculated a second time, and the six officers only were inoculated the third time.

"I have received no further information in regard to these inoculated men, most of whom are probably now in Egypt or the Dardanelles.

"3. In December, 1914, owing to reports of typhoid fever in High Street, East Maitland, where there have been cases for some years, I advised the Municipal Council to advise the people in that vicinity to be inoculated against typhoid fever. This was taken into consideration, but as preliminaries took a considerable time it was not till 13th March, 1915, that Dr. Alcorn opened a dépôt at East Maitland, which was attended by people mostly from the infected district. Dr. Alcorn reported to me that fifty-seven persons were inoculated once, forty-four persons were inoculated a second time, and seven or eight a third time.

"Since the inoculations no cases of typhoid have been notified at this Office from the former infected district, but it is rather early to judge the result, and more especially as the 'typhoid season' will not be on again till from November, 1915, to about March, 1916.

"4. About January, several cases of typhoid were reported from the vicinity of Morisset, and I recommended the Lake Macquarie Shire Council to advise inoculation. Some six people were inoculated by Dr. Harris, G.M.O., once, and two were inoculated twice.

"There have been no notifications of enteric from that particular district since.

"It is therefore a little difficult to express an opinion as to whether these inoculations have reduced the typhoid incidence in this particular neighbourhood.

"I, however, had charge of an anti-typhoid campaign at Winton, North Queensland, and for a 100 miles in the vicinity, in 1913, when I was Deputy Commissioner of Public Health for North Queensland.

"The disease had become very prevalent in Winton and in some of the shearing sheds on the adjacent stations, and as the shearers were moving about it was getting scattered through the country, and ordinary precautions did not seem to be of any avail.

"I therefore advised anti-typhoid inoculation, being inoculated myself by way of encouraging the rest, and as twelve had died out of seventy-seven cases the people both in the towns and on the stations were willing to submit to the little operation. All ages and sexes were inoculated, of which not a single person was laid up or felt any really unpleasant consequences except one of my own inspectors.

"The following shows the number of people inoculated and the number of inoculations:—

			Males.	Females.	Total.
First Inoculation	...	...	280	140	420
Second Inoculation	...	...	160	111	271
Third Inoculation	...	...	99	81	180

"All the people inoculated were given a printed card with their names and dates of their inoculations and the following request:—

'Should you at any time after receiving this card suffer from typhoid fever please report it to the Commissioner of Public Health, Treasury Buildings, George street, Brisbane, Queensland.'

"When the small outbreaks occurred in East Maitland and Morisset, I was anxious to know how far the Winton inoculations had been successful before recommending inoculation to the people in the Hunter River combined districts.

"I therefore wrote to the Secretary of the Queensland Public Health Department, inquiring if any of the people inoculated in the middle of 1913 had reported having typhoid fever, as requested on their cards.

"I received a reply in February, 1915, which I herewith annex,\* and it is very satisfactory as showing that no cases have been reported up to date.

"A fuller account of this can be read in the annual report of the Commissioner of Public Health for Queensland to the 30th June, 1913, pages 16 and 17, item "Winton Typhoid Campaign."

"The outbreak had been caused by a shearer coming from Victoria with typhoid, and starting it, probably in Winton first, and then at the Kynuna shearers' shed, about 120 miles off.

"The position was a very serious one to tackle, and I am quite sure that but for inoculation it could not have been dealt with satisfactorily. Only seven cases had been reported during the preceding twelve months, and none recently before the attack, and I had just reported that the district was in a healthy condition."

*Orange.*—Dr. L. Roberts, Orange Hospital. August 18, 1915:—

"Only the staff of this hospital, to the number of sixteen persons, were submitted to injection, only one of whom showed any marked signs of reaction to the injections, and none of whom since then have contracted enteric fever, so its value for the protection of the staff (where previously nearly every year a case would occur in an inexperienced probationer) has so far been good."

*Singleton.*

\* This states that no cards had as yet been returned.



*ingleton*.—Dr. R. W. H. Maffey. August 11, 1915 :—

"I beg to inform you that the number of inoculations carried out by me, viz., twenty-nine, is hardly sufficient on which to base any definite opinion as to the effect on the amount of typhoid occurring in the district. I have not had a case occur among those whom I have inoculated. I inoculated the other members of the family in three cases where one member had contracted the disease, and all remained free from infection. At Jerry's Plains, where typhoid has been rather common, I inoculated seven people living in houses where it had occurred, and I do not think any cases came from there last year."

"For several years cases occurred among the nursing staff at the local hospital, but since they have all been inoculated no case has occurred."

"On the whole I think the practice of anti-typhoid inoculation has been beneficial."

*Tamworth*.—Dr. H. L. Harris, 20th September, 1915 :—

"Anti-typhoid inoculation during 1914: Several persons were inoculated as a protection against typhoid, and I am not aware of any contracting the disease."

"Three doses in each case were administered hypodermically,  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and 1 c.c. (standardised to one thousand million per c.c.), without any after-effects."

"I am of opinion that anti-typhoid inoculation will considerably reduce the incidence of the disease, but since its introduction the public have not as yet realised its benefits, and feel very shy about its adoption, but as they become educated up to it the demand for inoculation will become increasingly popular each succeeding year."

*Dr. Buckley*, 13th August, 1915 :—

"I inoculated all the staff of the public hospital, and also the staff of the private hospital, and no one of them contracted typhoid fever. As a rule during the typhoid season one or more nurses become infected. None of the persons inoculated have contracted typhoid."

"There was less typhoid in Tamworth last year than usual."

"I inoculated about fifty people."

*Walla Walla*.—Dr. I. Silbermann, 20th August, 1915 :—

"In reply to your inquiry about the results of anti-typhoid inoculation, I have nothing unusual to report. No people vaccinated have acquired the disease, though all have been exposed to infection."

*Walgett*.—Dr. James Dawson, 6th September, 1915 :—

"There were a considerable number of cases of typhoid fever in this district about this time last year, some of them severe in type. With the vaccine obtained from you I inoculated the matron and nursing staff at the local hospital, the wardsman, and the sanitary employee in this town. None of these contracted the disease. The public generally did not avail themselves of the opportunity (with one exception)."

*Wellington*.—Dr. G. Watt, 15th September, 1915 :—

"A large number of people, probably over 100, inoculated. In no instance did disagreeable results follow the inoculation. No cases inoculated developed typhoid. In eight cases in which typhoid was suspected inoculations were carried out and each case ran a mild course. In these cases the doses administered were about 400 million, followed in six days by about 600 million. I fully believe that anti-typhoid inoculation has reduced the incidence of the disease in this district."

### 3. TUBERCULOSIS.

#### EXAMINATION OF SPUTA FOR TUBERCLE BACILLI.

(E. W. FERGUSON.)

DURING the year, 1,559 specimens of sputa were examined for the tubercle bacillus. Of this number, 747 specimens were received from the State Hospital and Asylum, Lidcombe, the remaining 812 being from various private practitioners and hospitals throughout the State. As many known tuberculous cases are treated at the Rookwood State Hospital, Lidcombe, it was thought advisable to place these cases in a separate tabulation.

The 812 other specimens were from 801 cases; 617 examinations were negative, and 189 were positive, while 6 were doubtful. An examination was regarded as doubtful when acid-fast organisms not typical in their morphology of the tubercle bacillus were seen, or where only one body resembling a tubercle bacillus was seen. In three out of the six doubtful cases another specimen was forwarded—in one of these there was a positive result, in two a negative.

The methods of examination were the same as those detailed in previous reports. The results have been arranged in tables showing the total results, also the results for each month with the percentage of positives, and the results for the quarters of the year.

The number of examinations are too few to enable any reliable deductions to be made, and cannot be taken as any real indication of the amount of tuberculosis present in the community at any particular time. The percentage results are also influenced by extrinsic



extrinsic conditions, such as epidemics of 'colds,' which lead to an examination being made of a patient's sputum. This probably accounts for the lower percentage results in the winter months of the year. The tables are given, however, in the hope that by a series of reports spread over a number of years it may ultimately be possible to obtain reliable deductions from them.

The 747 specimens from the State Hospital and Asylum, Lidcombe, have not been tabulated for the different months. These specimens were from 461 cases, many of the cases being examined twice or three times or oftener; the results of the re-examinations are shown in the table. These are of interest in a number of cases as showing the value of re-examinations—in 9 cases tubercle bacilli were detected at the end of two or more examinations.

TABLE I.  
RESULTS of the Examination of 812 Specimens of Sputa from various Sources.

	Positive.	Negative.	Doubtful.	Total No. of Exams.
Cases examined once only .....	189	600	3	791
Cases examined twice, giving the same result on each examination (6 cases) .....	.....	12	.....	12
One case examined three times, giving the same result on each examination.....	.....	3	.....	3
Cases examined twice, giving different results on each occasion (3 cases)—(a) 1st examination; (b) 2nd examination .....	1 (b)	..... 2 (b)	1 (a) 2 (a)	2 4
	189	617	6	812

TABLE II.  
SHOWING the Results for each Month.

Months.	Number of cases examined.	Number of examinations.	Positive examinations.	Per cent. of Positives to number of cases.	Negative examinations.	Doubtful.	Remarks.
January .....	53	55	15	28·3	39	1	Two cases examined twice.
February ...	54	54	16	29·62	38	...	.....
March .....	82	85	18	21·95	63	4	One case examined for second time, included in number of cases for February, not for March. Two cases examined twice.
April .....	60	60	20	33·33	40	...	.....
May.....	84	85	18	21·42	66	1	One case examined twice.
June .....	49	49	13	26·53	36	...	.....
July.....	80	81	14	17·5	67	...	One case examined twice.
August .....	68	69	14	20·58	55	...	One case examined for second time, included in number of cases for May, not for August.
September ...	81	81	22	27·16	59	...	.....
October .....	69	70	16	23·18	54	...	One case examined for second time (also re-examined in December), included in number of cases for September, not for October.
November ...	59	59	9	15·25	50	...	.....
December ...	62	64	14	22·58	50	...	One case examined for third time, included in number of cases for September, not for December. One case examined for second time, included in number of cases for November, not December.
Totals .....	801	812	189	23·59	617	6	

TABLE III.  
SHOWING the Positive Results for the Quarters of the Year.

Quarters of Year.	Number of Cases.	Positive.	Percentage of Positives.
January, February, March.....	189	49	25·92
April, May, June .....	193	51	26·42
July, August, September .....	249	50	20·08
October, November, December ...	190	39	20·52

TABLE IV.

EXAMINATION of Sputa from the Rookwood State Hospital and Asylum, Lidcombe.

	Positive.	Negative.	Doubtful.	Total No. of Examinations
Cases examined once only .....	152	169	1	322
Cases examined more than once, giving the same results on each examination :—				
Examined twice (47 cases) .....	14	80	...	94
Examined three times (45 cases).....	3	132	...	135
Examined four times (18 cases) .....	...	72	...	72
Examined five times (8 cases).....	...	40	...	40
Examined six times (1 case) .....	...	6	...	6
Examined seven times (2 cases) .....	...	14	...	14
Examined eight times (1 case) .....	...	8	...	8
Cases examined more than once, giving different results on different occasions :—				
Examined twice.				
+ -, 1 case } .....	5	7	2	14
- +, 4 cases }				
+? -, 2 cases }				
Examined three times.				
+ - +, 1 case } .....	4	5	...	9
- - +, 2 cases }				
Examined four times.				
+ - - -, 1 case }	5	9	2	16
+? - - -, 1 case }				
+? - + +, 1 case }				
- - + +, 1 case }				
Examined five times.				
- - - +, 1 case .....	1	4	...	5
Examined six times.				
- - +? - - -, 1 case }	...	10	2	12
- +? - - -, 1 case }				
Total (461 cases).....	184	556	7	747

## 4. SYPHILIS.

## WASSERMANN'S REACTION FOR SYPHILIS.

(E. W. FERGUSON.)

WASSERMANN'S reaction as a test for syphilis was carried out on 614 samples of blood during the year; this number of specimens was from 580 patients, there being thirty-four re-examinations. In addition a number of specimens received were worthless for the purpose of the test, being either too small in amount or already hæmolyzed on arrival. Blood sent from a distance practically never arrived in a suitable condition; to obviate this difficulty in testing country patients a scheme is being evolved to enable the serum to be separated and inactivated before forwarding to the Laboratory.

As in past years the test has been carried out according to Wassermann's original method. For extract, guinea-pig heart extract has been almost entirely used. As in previous reports the results have been divided into Positive, Incomplete Positive, Incomplete Negative, and Negative. Only complete hampering of hæmolysis has been regarded as positive, and similarly only complete hæmolysis as negative. Incomplete hampering has been classified as Incomplete Positive, and cases showing almost complete hæmolysis as Incomplete Negative.

The specimens have been grouped as far as possible under various stages of the disease, as suggested by clinical opinion; but, unfortunately, in the majority of cases no data were forwarded, and these specimens have been grouped as syphilis only. A few cases were sent in with information as to the presence of a definite lesion, for the opinion as to whether this was of a syphilitic nature; in most cases these have been grouped under the stage of the disease at which such a lesion would arise. An example might be quoted.—Cases of ulceration of the legs have all been grouped under the heading of tertiary syphilis. One case of suspected yaws was also tested.

For the percentages, Positive and Incomplete Positive cases have been grouped together, as an Incomplete Positive result is probably in most cases due to specific infection. It was thought necessary to work out the percentages only for the cases of (?) syphilis, primary, secondary and tertiary syphilis; the tests for syphilis in other conditions were so few that percentage results would have been worthless. As before, the cases with a diagnosis of probable secondary syphilis give the highest percentage of positive results, probably because the lesions are more characteristic in this stage. The tertiary percentages are lower probably because in many cases only a single lesion was present which might or might not have been a manifestation of tertiary syphilis.

A systematic examination of the children at the Deaf, Dumb, and Blind Institution was begun, but was abandoned after about half had been tested ; only three cases, however, out of sixty-three, showed the slightest trace of hampering, and in these cases this was probably due to errors of technique.

A number of cases were tested on more than one occasion. These are shown in Table II. Most of these probably had received anti-syphilitic treatment in the interval between the tests, but the information available was too scanty to prove of any value in tabulation.

TABLE I.  
RESULTS of Wassermann's Reaction.

Clinical diagnosis.	Positive.	Incomplete Positive.	Percentage of Positive and Incomplete Positive.	Incomplete Negative.	Negative.	Total.
Syphilis. No data .....	40	25	25.49	38	152	255
Primary syphilis .....	11	1	26.66	1	32	45
Secondary syphilis .....	32	10	48.83	9	35	86
Tertiary syphilis .....	21	12	32.35	10	59	102
Past syphilis .....	...	...	...	...	1	1
Cerebral syphilis .....	3	...	...	...	7	10
Tabes dorsalis .....	1	1	...	...	3	5
Congenital syphilis .....	2	1	...	...	2	5
<i>Other Conditions :—</i>						
Incontinence of urine .....	...	...	...	1	...	1
Hemiplegia .....	...	1	...	...	4	5
Yaws (?) .....	...	...	...	...	1	1
Negative controls .....	2	1	...	...	32	35
From Deaf, Dumb, and Blind Institution. (?) Congenital syphilis .....	...	...	...	3	60	63
Total .....	112	52	...	62	388	614

TABLE II.  
SPECIMENS EXAMINED MORE THAN ONCE.

Clinical diagnosis.	First Examination.	Second Examination.	Third Examination.	Number of Cases.	Number of Examinations.
Syphilis (?) (No data) .....	+	+	...	5	10
	+	-	...	6	12
	+ - -	+ - -	...	1	2
	-	+ - -	...	1	2
	-	-	...	2	4
	+	+ -	...	2	4
Secondary Syphilis .....	-	+	+	1	3
	+ - -	+	...	1	2
	+	+ -	+	1	3
	+	+	...	1	2
	+	+	-	1	3
	+	-	...	1	2
Tertiary Syphilis .....	+ -	+ -	+ -	1	3
	+ -	-	+ -	1	3
	-	-	...	1	2
	+	-	...	1	2
General Paralysis .....	+	+	...	1	2
Congenital Syphilis .....	...	-	...	1	2
Normal (?) .....	+ -	+ - -	...	1	2
Total .....	..	...	...	29	63

+ = Positive. + - = Partial Positive. + - - = Incomplete Negative. - = Negative.



## 5. DIPHTHERIA.

(J. B. CLELAND.)

DURING the year 1914, 1,777 swabbings were examined in ordinary routine for the presence of diphtheria bacilli. These include cases from general practitioners as well as a few swabbings from the Children's Hospital, from the Deaf, Dumb, and Blind Institution, and from soldiers in camp.

The same procedure in their examination was carried out in 1914 as in previous years, the cultures being examined at the end of twenty-four hours, and, if negative then, again at the end of forty-eight hours. The staining method adopted was that of Neisser, chrysoidin modification.

As in previous years, the positive results have been again divided into positives after twenty-four hours' incubation, and positives after forty-eight hours' incubation. Though in most cases a culture of forty-eight hours' incubation has been examined twice, in some instances, as for example in swabs arriving at the week end, the cultures had only been examined once by the end of forty-eight hours' incubation. Therefore the positive results under the forty-eight hour division are again divided into those positive after one examination, and those only positive after a second examination. As 476 swabs were positive after twenty-four hours' incubation only, and 154 were negative after twenty-four hours' and positive after forty-eight hours' incubation, the great value attached to the re-examination of a negative swab after another twenty-four hours' incubation is well illustrated.

A review of the total positive results for each month again shows a definite increase as the winter months are approached, the highest numbers being obtained in May and June, with a general decline with the onset of summer, though in December, 1914, there was again a definite increase. Table IA shows the monthly percentage of positive swabbings to the total positives for the year, and illustrates the same incidence of the disease if it be assumed that we receive each month about the same relative number of positive swabbings as there are cases of the disease amongst the community. It will be seen that in June, 1914, as in June, 1913, the highest percentage of positive swabbings to the total yearly positives again occurred. May comes next in 1914, whilst July was second in 1913. There was a relative increase in January, 1913, and a corresponding increase in December, 1914.

Table IB shows the percentage of positive swabbings to the total number of swabbings submitted for each month. This table is probably of much less value than the preceding one, inasmuch as the results may be considerably upset by the submission of a large number of swabbings from some particular source when a single case of diphtheria or of suspected diphtheria arises, as according to circumstances the number of negative swabbings thus submitted may vary from a few to a hundred. Such additions to the figures at once discountenance their value.

Table II gives a list of cases examined on more than one occasion. During the year several very persistent "carriers" have been under observation, which were in most cases originally instances of the disease diphtheria itself. Four cases were examined over an interval of from 50 to 60 days, one being positive on nine occasions, and negative twice. In one case, the length of time was 72 days, with four positive results and one negative; in other cases 82 days with thirteen positive results and one negative; 91 days with twelve positive results and two negative; 126 days with two positive results and two negative; 133 days with eleven positive results and one negative; and 216 days with eleven positive results and two negative. In those cases marked with an asterisk diphtheria bacilli were isolated and tested. In most of the cases in this table the negative results occurred towards the end of the period over which the examinations extended, but in some instances a negative result was obtained followed by further positive ones. As a rule, however, when such a negative result followed by positive ones took place, the diphtheria bacilli in succeeding positive examinations were few in number and only found after forty-eight hours' incubation.

## DIPHTHERIA CULTURES ISOLATED AND TESTED.

1. "E.E."—Girl, discharged from Coast Hospital after diphtheria. Examined over a period of twenty-five days from 5th May to 30th May; positive on five occasions, negative once; the last positive result was on 20th May.

Pure cultures were isolated from a swabbing taken on 16th May; typical granular diphtheria bacilli were isolated giving acid on glucose and dextrin with no reaction on mannitol, dulcitol, lactose, saccharose, or maltose, as well as a pointed diphtheroid with a clear space in its centre which gave no reaction on the above-mentioned sugars.

On 1st June, one c.c. of a 48-hour broth culture of this strain of diphtheria bacilli was inoculated into a guinea-pig which died within forty-eight hours, showing typical lesions such as local oedema, &c. A control guinea-pig protected with antitoxin survived.

2. "D.P."—Examination extended over a period of thirty-five days from 24th April to 29th May. Positive on five occasions and negative on one; last positive on 22nd May.

From

From this last positive result typical granular diphtheria bacilli were isolated, giving acid on glucose, and no reaction on mannitol, dulcitol, lactose, saccharose, maltose, or dextrin. Guinea-pigs tested with this strain on 1st June gave the same results as those from the previous case (1), the unprotected animal dying in forty-eight hours.

3. "E.D."—Girl, discharged from Coast Hospital after diphtheria. Examined over a period of fifty-seven days from 9th June to 4th August. Positive on nine occasions, negative on two; last positive on 23rd July, but only after forty-eight hours' incubation; negative on 30th July and 4th August. Typical granular diphtheria bacilli were isolated from a swabbing taken on 30th June. These gave similar sugar reactions to the culture isolated from No. 2 ("D.P."). Guinea-pigs inoculated on 9th July gave the same results as those in cases 1 and 2, the unprotected animal dying in forty-eight hours.

4. "K.R."—Girl. Examined over a period of ninety-one days from 6th March to 5th June. Positive on twelve occasions, negative twice. A negative result was obtained on 22nd April, a positive one on 29th April, a few diphtheria bacilli on 30th May, and a negative result on 5th June. From a swabbing taken on 21st May, typical granular diphtheria bacilli were isolated giving the same reactions on the test sugars as Nos. 2 and 3.

5. "E.M."—Carrier case after clinical diphtheria. Examined over a period of 138 days from 4th June to 20th October. Last positive on 19th September, negative on 20th October. Typical diphtheria bacilli were isolated from a swabbing taken on 10th July. These gave acid on glucose and no reaction on mannitol, dulcitol, lactose, or saccharose. Guinea-pigs inoculated with this culture on 10th August behaved similarly to those in cases 1, 2, and 3, the unprotected animal dying within forty-eight hours.

6. "C.A."—Patient at Coast Hospital where for seven or eight weeks after diphtheria he still retained the organisms in his throat. From cultures submitted on 26th May typical bacilli were isolated giving sugar reactions similar to those of cases 2, 3, and 4. Guinea-pigs inoculated on 1st June behaved similarly to those in cases 1, 2, 3, and 5, the unprotected animal dying within forty-eight hours.

7. "Nurse T."—Typical diphtheria bacilli were isolated from cultures submitted on 18th August, giving sugar reactions similar to those in cases 2, 3, 4, and 6. Guinea-pigs inoculated on 24th August behaved similarly to those in cases 1, 2, 3, 5, and 6, the unprotected animal dying within forty-eight hours.

8. Carrier case submitted by Education Department.—Typical diphtheria bacilli were isolated from cultures submitted on 8th May. These gave acid on glucose, and no reaction on mannitol, dulcitol, lactose, or saccharose. Animal inoculations made on 15th May behaved dissimilarly to those in the other cases, both guinea-pigs remaining well.

9. "Baby R."—Two and a-half years. Ill two days with tonsilitis, temperature 103° F. A short granular diphtheroid, not a diphtheria bacillus, was isolated, giving no change on glucose, mannitol, dulcitol, lactose or saccharose.

In reviewing the above results it will be seen that as regards sugar reactions all the diphtheria bacilli gave acid on glucose and no reactions on mannitol, dulcitol, lactose, or saccharose. In no instance in which it was tested was there any reaction on maltose, and in five out of six cases no reaction on dextrin. In six of the seven cases in which animal inoculations were made the organisms were toxic. These were probably all "carriers" following on actual instances of the disease. No information is obtainable as to the nature of the case from the Department of Education, but it is probable that this was a "carrier" case who had not had the disease, which would explain the absence of toxicity.

TABLE I.—Practitioners' Cases.

Month.	Positive Swabs.	Positive 48 hours.		Total Positive.	Negative.	Suspicious.	Grand Total.
		1st Exam.	2nd Exam.				
January .....	15	3	2	20	37	1	58
February .....	31	3	8	42	82	...	124
March .....	34	2	8	44	55	3	102
April .....	40	9	17	66	103	1	170
May .....	68	4	20	92	107	5	204
June .....	67	9	18	94 + 1 nose	118	1	213 + 1 nose.
July .....	43	1 (nose + throat).	23	67	154	7	228
August .....	41	2	11	54	76	3	133
September .....	24	3	8	35	69	1	105
October .....	25	...	14	39	150	...	189
November .....	32	2	10	44	75	3	122
December .....	47	3	15 + 1 nose	65	62	2	129 + 1 nose.
	467	41	154 + 1 nose.	662 + 1 nose.	1,088	27	1,777 + 2 nose.



TABLE IA.—Monthly percentage of positive swabbings to total positives for the year.

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
3·02	6·34	6·64	9·98	13·89	14·2	10·12	8·15	5·28	5·89	6·64	9·82

TABLE IB.—Percentage of positive swabbings each month to total number submitted in each month.

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
34·48	32·36	43·13	39·06	45·09	44·13	29·66	40·6	33·33	20·63	36·06	50·39

TABLE II.

Period over which patient was examined.	Number of times positive.	Number of times negative.	Period over which patient was examined.	Number of times positive.	Number of times negative.
2 days (3 examinations)	2	...	20 days .....	2	2
2 " .....	1	1	21 " .....	4	...
2 " (2 examinations)	1 (suspicious)	1	21 " .....	3	1
2 " (3 " )	...	2	21 " .....	3	...
3 " .....	...	2	22 " .....	3 + 1 (suspicious)	...
4 " (2 " )	1	1	22 " .....	1	1
4 " (4 " )	...	2	23 " .....	6	...
5 " .....	2	1	23 " .....	3	...
5 " (2 examinations)	2	...	24 " .....	4	...
5 " .....	1 + 1 (suspicious)	...	24 " .....	2	2
5 " (2 examinations)	...	2	24 " .....	2	...
6 " (2 " )	2	...	25 " * (2 examinations)	5	1
6 " (3 " )	1	1	26 " .....	5	1
6 " .....	...	2	26 " (2 examinations)	5	...
7 " .....	1 + 1 (suspicious)	...	26 " .....	3	2
7 " .....	1	1	28 " .....	1 + 1 (suspicious)	3
7 " .....	1 (nose) .....	1	32 " .....	5	1
7 " (5 examinations)	...	2	32 " .....	4	...
8 " .....	2	...	34 " .....	4 + 1 (suspicious)	1
8 " (4 examinations)	1	1	34 " .....	4	1
8 " .....	...	2	35 " *	5	1
9 " .....	2	1	39 " .....	4	1
10 " .....	3	2	42 " .....	8	1
10 " .....	2	1	42 " .....	3	2
10 " .....	1	1	45 " .....	4	...
12 " .....	1	2	45 " .....	3 + 1 (suspicious)	3
12 " .....	1	1	46 " .....	8	...
13 " .....	2 + 1 (suspicious)	...	47 " .....	4	3
13 " .....	1 + 1 (suspicious)	1	48 " .....	8	...
13 " .....	1	1	50 " .....	3	2
14 " (2 examinations)	2	1	55 " .....	...	2
14 " (2 " )	2	...	57 " .....	9	2
14 " (2 " )	1	1	58 " .....	4 + 1 (suspicious)	1
14 " .....	...	2	72 " .....	4	1
15 " .....	3	1	82 " .....	13	1
15 " .....	1	2	91 " *	12	2
16 " .....	2	1	126 " .....	2	2
17 " .....	1	1	138 " *	11	1
18 " (2 examinations)	3	...	216 " .....	11	2

\* Diphtheria bacilli were isolated and tested



## 6. VACCINES.

(J. B. CLELAND and E. W. FERGUSON.)

IN spite of the advent of war in August, which has led necessarily to considerable interference with the ordinary work of the laboratory, 193 vaccines were prepared and issued during 1914, compared with 170 during the previous year. Unfortunately, as has always been the case, we received no later information as to the value of many of the vaccines supplied, so that a judgment of the efficacy and suitability in various diseases can only be formed as a rule on a few cases instead of on all those for which we have supplied this remedy. Another item of considerable moment in estimating the value of vaccine treatment is the fact that, in a considerable number of our cases, by the time the vaccine has reached the practitioner, the patient for whom it was intended has improved so greatly as to do away with the necessity of this form of treatment. Delays are, of course, unavoidable when slow-growing organisms are dealt with or when specimens are transmitted over long distances, but it may be pointed out that had the vaccines reached the patients in the cases referred to earlier than they did, they would probably in many instances have been administered and the improvement attributed to them rather than to natural recovery.

The procedure followed in the preparation of the vaccines has consisted, as a general rule, of efficient sterilisation, usually at 58°C. for an hour, checked by making cultures previous to sealing in ampoules, and with the addition of 5 per cent. carbolic acid to the vaccine itself. The majority of vaccines have been standardised by comparing them with an emulsion of the organism dealt with of known strength. This rather rough and ready method appears to give just as efficient results as more accurate means of enumeration, and is a very great saving of time in a busy laboratory.

The preparation of large supplies of anti-typhoid vaccine is dealt with separately.\*

*Acne and other skin conditions*.—In the simple forms of acne, *Staphylococcus albus* and occasionally the acne bacillus were the organisms usually isolated. The few cases treated have, as a rule, shown definite improvement with a vaccine of one or both of these organisms. In the case of boils, pustules, and other purulent skin conditions, by far the most usual organism isolated has been *Staphylococcus aureus*. As is usual in vaccine treatment of such conditions, most of the cases which were treated, and later were reported on, were cured. *Streptococci* were isolated from a case of pustules over a great part of the body, vaccine treatment resulting in almost complete recovery. In a case of perionychia, coliform bacilli of three types were isolated, and a mixed vaccine of these, administered over a period of six weeks, led to improvement.

*Septic joints and Sinuses*.—The predominant organisms from septic joints have been streptococci, and next to these *Staphylococcus aureus*. Coliform bacilli were isolated from a septic arthritis of the knee and from a compound fracture of both bones in the forearm. In sinuses *Staphylococcus aureus* has been most frequently met with. In three infected operation wounds coliform bacilli were isolated from two and *Staphylococcus aureus* from one.

*Pyorrhœa Alveolaris and Rheumatoid Arthritis*.—Streptococci have been the usual organisms isolated. Marked improvement is reported in one case from a streptococcal vaccine.

In another case where there was oral sepsis, rheumatoid arthritis and diarrhœa in a girl of 24 years, *B. acidi lactici* was isolated from the fæces and a vaccine of this produced improvement, the diarrhœa disappearing. Later vaccines of various cocci from the oral sepsis led apparently to some temporary improvement, but the case finally rather suddenly developed cerebral symptoms and died.

*Lung conditions*.—In two cases of pulmonary tuberculosis with mixed infection, vaccine treatment by streptococci or diplococci isolated from the sputum apparently led to an improvement. In cases of asthma and bronchitis, improvement also followed vaccine treatment by various organisms. In cases of empyema vaccine treatment seems also of service.

*Uterine sepsis*.—The usual organisms isolated were streptococci, though coliform bacilli and *Staphylococcus aureus* were sometimes found. Most of the cases of puerperal septicæmia died; but in one in which a streptococcus was isolated from the uterine cavity and a vaccine used, the result of this treatment apparently materially helped in a cure.

*Bacilluria*.—A large number of coliform vaccines have been prepared from cases of bacilluria. In those reported on, several were regarded as cured and others improved, whilst only in three cases reported on did the vaccine seem to have no good effect.

## ACNE, Furunculosis and Suppurative Conditions of the Skin, &amp;c.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared.	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/763	Acne vulgaris	Pustule	<i>S. albus</i>	<i>S. albus</i> and stock acne bacillus.	Coast Hospital.	.....	.....	.....
14/3032	Acne	Pustule	<i>S. albus</i>	<i>S. albus</i>	Dr. A. G. Cooley.	Course, four weeks. One ampoule (500 mill. per c.c.).	Partial recovery.	Resisted previous vaccine treatment.
14/2506	Acne	Pustule	<i>S. albus</i>	<i>S. albus</i> and stock acne bacillus.	Dr. Hall.	.....	Slightly improved at first. Later no beneficial effect noticed. A later vaccine improved patient slightly.	.....
14/3188	Acne	.....	.....	Stock acne	Dr. Harbison	Treatment continued for months. Patient still under treatment. No other treatment.	Much improved.	Stock acne used before and since treatment with equally good results.
14/2132	Acne	Pustule	<i>S. albus</i>	<i>S. albus</i> and stock acne bacillus.	Dr. Harbison	Course, two months. 500 mill.	.....	.....
14/4014	Acne	Pus	<i>S. albus</i> ; acne bacillus	<i>S. albus</i> ; stock acne bacillus	Dr. Sellink, Garrison Hospital, Victoria Barracks.	.....	.....	.....
14/4088	Pustular acne	Pus	<i>S. albus</i>	<i>S. albus</i>	Dr. Brierley	.....	.....	.....
14/1253	Pustules on legs	Pustule	<i>S. aureus</i>	<i>S. aureus</i>	Dr. A. G. Cooley	.....	.....	.....
14/3491	Purulent infection of leg (cutaneous).	Agar cultures of pus	<i>S. aureus</i>	<i>S. aureus</i>	Coast Hospital	.....	.....	.....
14/3165	Pustules over most of body (also scabies?).	Pus	<i>Streptococcus</i>	<i>Streptococcus</i>	Dr. A. G. Cooley	Five injections at weekly intervals, one ampoule (100 mill. per c.c.).	Partial recovery.	.....
14/2740	Pustules	Cultures from pus	<i>S. aureus</i>	<i>S. aureus</i>	Wagga Hospital	.....	.....	.....
14/3440	Furunculosis, complicating eczema.	Pus from furuncle	<i>S. aureus</i>	<i>S. aureus</i>	Coast Hospital	Course, five weeks. 100 (stock), 150, 200, 300, 400 mill. (autogenous).	.....	.....
14/2851	Eczema.	Pus from boils	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Van Sonaren	Course, about four weeks. 170, 340, 500, 500, 1,000, 1,000, 1,000, 1,000 mill. twice weekly.	Improved	.....
14/4997	Recurrent boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Coast Hospital	.....	.....	.....
14/4922	Boils	Swab from boil	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Harbison	.....	.....	.....
14/3956	Recurrent boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Scott Good, Young District Hospital.	Course, one month. 500 mill. once a week. Course, seven weeks. 100, 150, 200, 250, 300, 400, 500 mill. at intervals of seven days.	.....	.....
14/3656	Boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Hipsley	.....	.....	.....
14/3432	Boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Harbison	Course, six weeks. 250 mill. weekly	.....	.....
14/3432	Boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Harbison	Unable to trace record	.....	.....
14/3281	Boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Harbison	Condition cleared under local treatment	.....	.....
14/3034	Boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Harbison	.....	.....	.....
14/2083	Boils in crops	Pus	<i>S. albus</i>	<i>S. albus</i>	Sydney Medical Mission	.....	.....	.....
14/2116	Recurrent boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Harbison	Course, five weeks. 250 mill. to begin with, increased by 150 mill. up to 500 mill. One dose per week. Course, six weeks	.....	.....
14/2126	Recurrent boils	Pus	<i>S. albus</i>	<i>S. albus</i>	Dr. Guthrie Hunter	Vaccine not used	.....	.....
14/2106	Boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Coast Hospital	Course, two months. 50 mill., four days intervals, 75, 75, 75, 100, 150 mill., eight days interval, 200 mill., six days interval, 250 mill., fourteen days interval, 250 mill., fourteen days interval, 500 mill.	.....	.....



## ACNE, Furunculosis and Suppurative Conditions of the Skin, &amp;c.—continued.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared.	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/1712	Boils	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. A. Palmer	Course, six weeks. 500 mill. at every injection.	Cured	Boils opened before first injection, but none after the first.
14/1316	Boils (continuous series)	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. L. R. Parker	Vaccine not used	Cured	
14/1246	Multiple boils and carbuncles	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Harbison	Course, six weeks. 500 mill.	Cured	Case under treatment for 6 months previously. Since beginning of vaccine no other treatment.
14/2555	Multiple boils after enteric fever.	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. H. E. Lee	Only one injection. Vaccine treatment was not continued as no further boil appeared up to the time of final injection.		
14/4783	Pustules	Cultures	<i>S. aureus</i>	<i>S. aureus</i>	Wagga Hospital	No data		
14/679	Pustular infection of neck	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Balmain Hospital			
14/3138	Furunculosis of neck (obstinate).	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Dight			
14/4272	Recurrent furunculosis of knee and arm.	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. J. Binns			
14/4077	Pustular eruption on legs of several years' duration.	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. K. Whiting			Glands in groin enlarged.
14/203	Abscess of forearm	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Coast Hospital			
14/2895	Abscess of leg	Pus	Streptococcus	Streptococcus	Coast Hospital			
14/2785	Abscess	Pus	<i>B. lactis aerogenus</i> type	Coliform	Newcastle Hospital			
14/2970	Carbuncle	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Coast Hospital	Course, five weeks. Initial dose of 100 mill. with weekly increase of 100 mill.	Cured	Other treatment, excision of carbuncle before start of vaccine treatment.
14/3817	Carbuncle of neck.	Pus	<i>S. aureus</i>	<i>S. aureus</i>	St. George Cottage Hospital.	Course, four weeks. 500 mill. Three doses at twenty-four hour intervals; three doses at forty-eight hour intervals; then after twelve days interval, six injections at forty-eight hour intervals.	Cured	Fomentations, scraping under anæsthetic and tonic mixture. Scarlet red ointment.
14/3803	Cellulitis of finger constantly recurring.	Pus from finger	<i>S. aureus</i>	<i>S. aureus</i>	Royal Military College, Duntroon.	Course, fourteen days. One ampoule every third day.	Cured completely	Other treatment, tonic and general.
14/4341	Cellulitis of the lips and face	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Ellis			Patient died before vaccine could be used.
14/2627	Cellulitis of palm	Pus	<i>S. albus</i>	<i>S. albus</i>	Dr. Evans	Course, eighteen days. Five injections, 25, 50, 100, 150 mill. at intervals of two days; then ten days interval, and 200 mill.	Cured	Condition had started to improve before commencing vaccine treatment. Fomentations, douchings, &c.
14/551	Perionychia	Pus	Coliform bacilli (three types), viz. <i>B. lactis aerogenus</i> type, <i>B. Friedlander</i> type, and type with acid on glucose; no change on mannitol, dulcitol, lactose, or saccharose.	Mixed coliform.	Dr. C. Hall	Course, six weeks. 500 mill.	Improved.	
14/3965	Sycosis.	Cultures from face	<i>S. aureus</i>	<i>S. aureus</i>	Dr. Schlink, Garrison Hospital, Victoria Barracks.			
14/4437	Sycosis.	Agar culture	<i>S. aureus</i>	<i>S. aureus</i>	Coast Hospital.	Course, three weeks. 25 mill. increased to 100 mill. Various local remedies and nerve sedators.	No effect	
14/4056	Dermatitis artefacta	Scraping from scrotum	Gram positive diplococcus.	Gram positive diplococcus	Dr. Denniston	Course, about three months. 50 mill. increased to 400 mill. Salvarsan (several doses). Pot. iodid., &c.	Improved, but patient later died.	Green pus rapidly cleared up and the lesions (superficial ulcers) healed. <i>Spiracheta peritoni</i> obtained at R.P.A.H. four years ago, but not here during present illness, though search was made. Dr. MacKenzie, who looked after patient at R.P.A.H., states that the present attack exactly resembled the previous one, when sinuocœtes were found. Also had heart disease. Lesions almost healed, but extreme emaciation at death.
14/4145	Yaws.	Pus from ulcer of thorax.	<i>B. pyocyaneus</i> <i>S. aureus</i> .	<i>B. pyocyaneus</i>	Coast Hospital			
14/2392		Pus	Coliform bacillus and streptococcus.	Streptococcus	Balmain Hospital	No data.		
14/1564	Septic joint of thumb	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. K. Herring	Vaccine not used		



## DISEASES of Joints, Sinuses, and Abscesses, &amp;c.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/1772	Chronic suppurating hand	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Balmain Hospital	No data	.....	.....
14/2025	Abscess of thigh.	Pus	<i>Staphylococcus</i> (white)	<i>Staphylococcus</i>	Coast Hospital	.....	.....	.....
14/400	Cellulitis of leg with abscesses.	Pus	<i>S. aureus</i> and <i>S. albus</i> (previously a <i>streptococcus</i> was obtained).	<i>S. aureus</i>	Dr. R. T. Michell	Course, five weeks. 125, 250, 375, 500, 500, 500 mill. at intervals of from five to six days.	Very much improved	Slight reaction after first injection, none after the others.
14/1469	Septic leg	Swabbing from leg	<i>S. aureus</i>	<i>S. aureus</i>	Balmain Hospital	Course, ten days. 500, 1,000, 1,500 mill.	Cured	Wet dressings.
14/316	Compound fracture of both bones of forearm, which became infected.	Pus	<i>Coliform bacillus</i>	<i>Coliform bacillus</i>	Parramatta District Hospital	Course, nine weeks. First injection, 140 mill.; second injection, 200 mill. in seven days; third injection, 250 mill. in ten days; fourth injection, 300 mill. in fourteen days; fifth injection, 400 mill. in fourteen days; sixth injection, 500 mill. in fourteen days. Other treatment—Antiseptic baths, drainage, and foment.	Cured	Both sinuses gradually closed up and completely healed. The vaccine certainly appeared to help clear up the supuration and the injections caused very little reaction.
14/1408	Infection following tram accident.	Pus	<i>Streptococcus</i>	<i>Streptococcus</i>	Balmain Hospital	Course, twenty-seven days. 50, 75, 100, 125, 150 mill.	Cured	Tonics, wet dressings.
14/1771	Suppurating periostitis of femur.	Pus	<i>Staphylococcus</i> , <i>Streptococcus</i> , <i>B. proteus</i> .	Mixed vaccine of <i>Staphylococcus</i> , <i>Streptococcus</i> , and <i>S. aureus</i>	Dr. Wagh, Parramatta District Hospital	.....	.....	.....
14/1903	Abscess of sternum and ribs	Pus	<i>S. aureus</i>	<i>S. aureus</i>	Dr. K. Hering	Vaccine not used, patient being much better	.....	Tub. bacilli not detected.
14/734	Septic arthritis	Pus	<i>S. albus</i>	<i>S. albus</i>	Balmain Hospital	No data	.....	.....
14/291	Septic arthritis (knee).	Pus from knee-joint	<i>Coliform bacillus</i> and <i>S. aureus</i> (isolated several times).	<i>Coliform bacillus</i> and <i>S. aureus</i>	Marwickville Cottage Hospital	Course, about two and a half months. Initial dose of 250 mill. increased later to 1,000, and then decreased to 500 mill. (seventeen injections), <i>S. aureus</i> . One injection, coliform vaccine.	Cured. Joint remained stiff with slight power of flexion.	Treated prior to vaccine with sod. sal. After vaccine treatment started was put on tonics. Joint opened and pus removed. Drainage tubes inserted. Leg very bad and swollen to twice natural size. Thought leg might have to be amputated. Not much improvement till vaccine treatment started. Cleared up with movable joint. Other treatment—Eisumth paste injection (1).
14/101	Suppurating knee-joint (Trauma).	Pus	<i>Streptococcus</i>	<i>Streptococcus</i>	Dr. E. K. Herring	Course, six weeks 100 mill.	Cured	.....
14/101	Septic knee-joint.	Swab from knee-joint. Later—Swab from knee.	<i>Streptococcus</i> and <i>S. aureus</i>	<i>Streptococcus</i> and <i>S. aureus</i>	Wagga Hospital	.....	.....	.....
14/28	Puerperal	Pus from knee-joint	<i>Streptococcus</i>	<i>Streptococcus</i>	Dr. W. L. Kirkwood	Not used	Unimproved	Patient died before arrival of vaccine.
14/1384	Septic knee-joint.	Fluid from knee	<i>Streptococcus</i>	<i>Streptococcus</i>	Dr. D. Alken	Course, five days. 100 mill. for five consecutive days.	.....	Joint condition gradually became worse. Later polyvalent anti-streptococcal serum injected. Also joint opened. Knee opened and drained.
14/1706	Septic knee-joint.	Pus from knee	<i>Streptococcus</i>	<i>Streptococcus</i>	Balmain Hospital	Course, thirty-two days. 50, 100, 200, 200 mill.	Cured	.....
14/1380	Septic joint.	Pus from joint.	<i>Streptococcus</i>	<i>Streptococcus</i>	Balmain Hospital	No data	.....	.....
14/146	Septic hip-joint.	Culture of pus from hip-joint.	<i>Streptococcus</i>	<i>Streptococcus</i>	Coast Hospital	.....	.....	.....
14/707	Septic hip-joint.	Pus from hip-joint.	<i>S. aureus</i>	<i>S. aureus</i>	Balmain Hospital	Course, fifteen days.	Cured	Local applications before vaccine. Antiseptics synchronous with vaccine.

## DISEASES of Joints, Sinuses, and Abscesses, &amp;c.—continued.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared.	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/2785	Septic hip-joint with pneumonia.	Pus from hip-joint....	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Western Suburbs Cottage Hospital.	.....	.....	.....
14/3273	Sinus .....	Culture from sinus ..	<i>Streptococcus</i> and gram negative bacillus.	<i>Streptococcus</i> .....	Wagga Hospital.	.....	.....	.....
14/821	Sinus of thigh.	Culture from sinus in left thigh.	<i>Streptococcus</i> ; diphtheroid; <i>S. aureus</i> and <i>B. pyocyaneus</i> .	(1) <i>Streptococcus</i> and (2) diphtheroid.	Coast Hospital .....	.....	.....	.....
14/73	Sinus of hip .....	Agar culture of pus ..	<i>S. albus</i> and diphtheroid ..	Mixed vaccine of <i>S. albus</i> and diphtheroid.	Coast Hospital .....	.....	.....	.....
14/126	Sinus of hip .....	Pus from sinus .....	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Coast Hospital .....	.....	.....	.....
14/1167	Sinus of tibia, following acute osteomyelitis.	Pus from sinus .....	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Coast Hospital .....	.....	.....	.....
14/1413	Persistent sinus.....	Pus from sinus .....	<i>S. aureus</i> and sporing bacillus	<i>S. aureus</i> .....	Wagga District Hospital	.....	.....	.....
14/5353	Psoas abscess .....	Pus .....	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Dr. S. H. Weedon .....	Course, one month, 15, 30, 45, 60, 75, 90 mill. at intervals of five days.	Cured.....	Tub. bacilli not detected. Iodoform dressings with vaccine and general treatment.
14/792								Tub. bacilli not detected. Liq. sod. chlor. dressing.
14/4772	Sinus to kidney.....	Pus from sinus .....	<i>S. aureus</i> and <i>S. albus</i> .....	<i>S. aureus</i> .....	Molong Hospital .....	Course, five weeks. 500 mill. per week .....	Cured.....	General tonics.
14/308	Infected operation wound ..	Swabbing from wound ..	Gram negative bacillus of <i>B. acidilactici</i> group.	Gram negative bacillus of <i>B. acidilactici</i> group.	Dr. H. Stoker .....	Course, six weeks. One injection of 500 mill. per week.	Healed .....	
14/3035	Infected operation wound ..	Pus .....	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Coast Hospital .....			
14/303	Infected operation wound ..	Swabbing from wound ..	Coliform bacillus of <i>B. acidilactici</i> group.	Coliform bacillus .....	Dr. H. Stoker .....			
MOUTH and Accessory Sinuses.								
14/1503	Pyorrhoea alveolaris and rheumatoid arthritis.	Pus from gums .....	<i>Streptococcus</i> .....	<i>Streptococcus</i> .....	Coast Hospital .....	Course, two months. May 4, 8, 15—10 mill.; May 19, 22, 26, 29—15 mill.; June 3, 5, 9, 12—20 mill.; June 16, 19—25 mill.; June 23—30 mill.; June 26—35 mill.; June 30 and July 3—10 mill.	Marked improvement....	Other treatment.—Pot. i. cañl., arsenic, guaiacol carb., iodine (external). Careous stumps removed under general anæsthetic. Synchronisms with vaccine treatment. Improvement was only noticeable during last month of vaccine treatment.
14/2036	Rheumatoid arthritis, pyorrhoea alveolaris, diarrhoea. Girl of 24 years.	Facies .....	<i>B. acidilactici</i> .....	<i>B. acidilactici</i> .....	Dr. J. T. Paton .....	Course, one month. 5, 10, 12, 16 mill. at intervals of one week for one month. 100 mill. increased by 50 mill. each twice a week. Course, fourteen days. Also coliform vaccine once a week for diarrhoea. Course, one week. 250 mill. ....	Improved, diarrhoea disappeared.	Patient improved after first lot of vaccine, but although it continued she went down steadily after a fairly sudden relapse with cerebral symptoms. Patient very much worse. Teeth removed. Steady improvement.
14/3194	Rheumatoid arthritis .....	Twelve weeks later—Serum culture from oral sepsis.	<i>Coccus</i> (? staphylococcus) ..	<i>Coccus</i> .....	Dr. Percy Wood .....	Repeated supplies of mixed vaccines over four months.	Apparently no result....	
14/4752	Pyorrhoea alveolaris and rheumatoid arthritis.	Pus from gums .....	<i>Streptococcus</i> , &c. ....	Mixed vaccine .....	Dr. Ellis .....	Vaccine not used .....	.....	
14/2225	Pyorrhoea .....	Pus from gums .....	<i>Streptococcus</i> ; diphtheroids.	<i>Streptococcus</i> .....	Dr. Lee Brown .....	Vaccine not used. Patient did not undergo treatment.	.....	
14/4818	Pyorrhoea alveolaris .....	Pus from gums .....	<i>Streptococcus</i> (gram negative).	Mixed vaccine .....	Wagga Hospital .....		.....	
14/3358	Recurrent colds in head .....	Culture .....	<i>S. albus</i> and gram negative coccus.	Mixed vaccine, <i>S. albus</i> and gram negative coccus.	Dr. A. Palmer .....		.....	Apparently found of value, taken periodically, in preventing infection. Apparently also cut short an attack two days after this began, which occurred four months after last protective dose.
14/4065	Colds in head .....	Nasal swabbings .....	Diphtheroid (acid on glucose only); positive coccus.	Mixed vaccine, diphtheroid, and positive coccus.	Dr. Chapple .....	Two injections of 50 mill. at intervals of one week.	Cured.....	Inflammatory reaction locally. Have not had a cold since.
14/4671	.....	Agar culture from throat.	<i>Streptococcus</i> .....	<i>Streptococcus</i> .....	Wagga Hospital .....		.....	
14/52	Mastoid wound.....	Pus cultures.....	Granular diphtheroid (acid on saccharose), streptococcus.	Diphtheroid, streptococcus ..	Coast Hospital .....	Not used .....	.....	

## Mouth and Accessory Sinuses—continued.

No	Disease	Specimen	Organism found	Organism from which vaccine was prepared	Reporter	Course, Dosage, &c.	Result	Notes
14/1083	Ethmoidal catarrh.....	Nasal discharge.....	<i>M. catarrhalis</i> .....	<i>M. catarrhalis</i> .....	Dr. E. Ken Herring.....	Two injections of 500 mill. at ten days interval	No effect .....	Seemed to have no effect and was not continued. The catarrh has since cleared however, and it is possible the vaccine had effect.
14/3854	Acute mastoid abscess .....	Pus .....	Streptococcus .....	Streptococcus .....	Dr. G. H. B. Deek.....	Vaccine not used .....	.....	Operation was performed the day vaccine was received.
14/787	Abscess of breast, opened a month earlier.	Pus from breast .....	Streptococcus; colon bacilli of Friedlander-neapolitanus type.	Colon bacillus (streptococci did not grow).	Dr. Withers, Auburn .....	Vaccine not used .....	.....	On microscope examination it was found to be malignant and breast amputated.
14/4006	Abscess of breast (?) .....	Pus from breast .....	Streptococcus .....	Streptococcus .....	Balmian Hospital .....	No data.....	.....	.....
14/760	Chronic abscess of breast (three months' duration).	Pus .....	<i>S. aureus</i> and coliform bacillus.	<i>S. aureus</i> .....	Dr. Guy Menzies .....	Course, about three weeks. 5 ampoules at intervals of five days each. Other treatment.—Free incision and drainage.	Cured.....	.....

## INFECTIONS of the Breast.

## PULMONARY System.

14/4880	Pulmonary tuberculosis (advanced) with secondary infection.	Sputum .....	<i>Streptococcus</i> ; yeasts .....	<i>Streptococcus</i> .....	Dr. G. K. Smith .....	Course, four weeks. Initial dose 50 mill. Dose rapidly worked up to 250 mill. four-five days' interval. Later 500 mill. was given at intervals of seven days. Temperature subsided slightly (transient). Course, about two months. 5, 15, 20, 30, 40, 50 mill. at three day intervals. The last dose repeated eight times with doses of the tuberculin.	Patient died.....	Tub. bacilli present. The lungs were in a very advanced state of disease when treatment was commenced.
14/1700	Pulmonary tuberculosis with mixed infection.	Sputum .....	<i>Streptococcus</i> ; diplococcus .....	Mixed streptococcal.....	Dr. Boeke .....	.....	Improved .....	The patient when seen last week had lost his cough and feels well.—Ten months later.
14/4254	Pulmonary tuberculosis with mixed infection.	Sputum .....	Gram positive <i>diplococcus</i> ; gram negative bacilli, &c.	Gram positive <i>diplococcus</i> .....	Dr. Busby.....	Course, seventeen days. 60 mill. increased by 30 mill. each time every third day.	Improved .....	Tub. bacilli present. Patient unable to tolerate tuberculin treatment. Temperature became normal both morning and evening. Tuberculin treatment then started. Now has practically no sputum and is feeling much better and stronger.
14/1263	Lobar pneumonia .....	Sputum .....	<i>Pneumococcus</i> .....	<i>Pneumococcus</i> .....	Dr. H. Weedon .....	.....	.....	Vaccine used on another patient. No reaction. The patient died from the pneumonia.
14/344	Lobar pneumonia .....	Sputum .....	<i>Pneumococcus</i> .....	<i>Pneumococcus</i> from this case and another pneumococcal case.	Broken Hill Hospital .....	Patient died before receipt of vaccine.....	.....	Vaccine used on another (alcoholic) patient with pneumonia. No reaction. The patient died.
14/210	Lobar pneumonia .....	Sputum .....	<i>Pneumococcus</i> .....	<i>Pneumococcus</i> .....	Broken Hill Hospital .....	Patient died before receipt of vaccine.....	Marked improvement.....	Marked improvement in breathing and freedom from asthmatic attacks. Vaccine followed course of saliva san injections in hospital.
14/3264	Chronic bronchitis, asthma and tertiary syphilis.	Sputum .....	Gram negative bacillus .....	Gram negative bacillus .....	Dr. Hods .....	Course, three weeks. Initial dose 20,000. Increased about one-fifth at intervals of three-four days.	Improvement .....	Patient previously had course of vaccine treatment with complete relief for about eight months. Other treatment—Expectorant mixture. Loss of cough and sputa.
14/3344	Asthma and chronic bronchitis.	Sputum .....	Streptococci and positive cocci.	Mixed streptococcus and positive cocci.	Dr. Hods .....	Initial dose 20,000. Four days' interval. Increase of about one-fifth. Interrupted after three doses.	General improvement .....	.....
14/3696	Chronic asthma, bronchitis, influenza (?)	Sputum .....	Gram negative bacillus .....	Gram negative bacillus .....	Dr. E. K. Herring .....	Course, about six weeks. 250, 500, 250, 500, 500 mill. at weekly intervals.	.....	.....



## PULMONARY System—continued.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared.	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/1497	Asthma and chronic bronchitis.	Sputum	Gram positive coccus; gram negative bacillus.	Mixed vaccine	Dr. Hoets	Course, about three-four weeks. Initial dose 20,000; successive doses increased by about one-fifth. Four days' interval.	Cured clinically	Patient went up country and later on relapsed.
14/3367	Bronchitis	Sputum	<i>Streptococcus</i> ; gram negative bacillus.	Mixed <i>Streptococcus</i> and gram negative bacillus.	Dr. Deck	Course, three and a half weeks. 3 mill. per dose; three injections.	Improved	Improvement after second injection.
14/2598	Chronic bronchitis	Sputum	Mostly gram negative bacilli with a few gram positive cocci, gram positive bacilli, and streptococci.	Mixed vaccine	Dr. Hoets	Only one dose given. Patient did not continue treatment.	.....	.....
14/3964	Abscess of lung	Sputum	Gram positive cocci.....	Mixed vaccine, chiefly gram positive cocci.	Marickville Hospital (Dr. Newton).	Course, four weeks. 500 mill. Other treatment—Inhalation, stimulants, &c.	Unaffected	Tub. bacilli not detected.
14/3010	Pulmonary abscess	Discharge	Later—Gram negative cocci and some gram positive cocci.	Mixed vaccine	Dr. Rogers	Three injections given, but treatment not persisted with; patient's condition becoming worse; he eventually died.	.....	.....
14/4785	Pulmonary abscess	Pus from lung	<i>Streptococcus</i>	<i>S. aureus</i> ; later <i>Streptococcus</i> and <i>S. aureus</i> .	Bathurst Hospital	Course, six weeks. Vaccine every third day	Improved	Temperature distinctly lower after using vaccine. Died from gradually increasing weakness.
14/3142	Subphrenic abscess	Pus	Coliform and <i>B. proteus</i>	Mixed coliform and <i>B. proteus</i> .	Matland Hospital	Details unobtainable	.....	.....
14/839	Arthritis deformans	Sputum	<i>Streptococcus</i> and <i>M. catarrhalis</i> (?); later <i>Streptococcus</i> .	<i>Streptococcus</i> and <i>M. catarrhalis</i> ; later <i>Streptococcus</i> .	Balmain Hospital	Course, twenty-three days. 25, 50, 75, 90, 100, 100 mill. every fourth day.	Improved	Tub. bacilli not detected (three examinations).
14/3025	.....	Sputum	Gram positive streptococci; gram negative bacillus.	Mixed.....	Wagga Hospital	.....	.....	.....
14/3496	Appendicitis (? tubercular)	Sputum	<i>Streptococcus</i>	<i>Streptococcus</i>	Dr. E. K. Herring	Vaccine every third day.....	.....	Tub. bacilli not detected in sputum. Vaccine not used.
14/3177	Hydatid cyst of lung, removal of cyst, suppuration in cavity.	Pus from lung	<i>S. aureus</i> ; <i>S. albus</i> ; <i>Streptococcus</i> .	(1) <i>S. aureus</i> , (2) <i>Streptococcus</i> .	Bathurst Hospital	.....	Patient died.	Patient died of acute heart failure before vaccine could produce any effect.
14/1325	Empyema with pneumonia	Pus	<i>B. pyocyaneus</i> .....	<i>B. pyocyaneus</i> .....	Marickville Hospital	Course, eighteen days. 250 mill., followed by three injections of 500 mill. at intervals respectively of nine, five, four days.	Cured.....	Tub. bacilli not detected. The use of the vaccine apparently contributed to the comparatively rapid cure.
14/3597	Empyema following influenza pneumonia.	Pus from chest.....	Diplococcus (probably pneumococcus).	Diplococcus	Dr. C. Read	Course about five weeks from 22nd September to 26th October. 500 mill. Tapped on 14th and 18th September. Rib resected on 23rd September.	Good	Patient had a bad condition of heart with dyspnoea, general oedema, and ascites, and was at death's door on 26th and 27th September, but is now up and will be well in a very short time.
14/3593	Influenza with pleurisy.....	Pleuritic fluid	Gram negative fluorescent bacillus.	Gram negative fluorescent bacillus.	Dr. E. K. Herring	.....	.....	Patient (child) developed high temperature with rigors following very severe attack of scarlet fever. Blood culture sterile. Developed empyema and pus in right temp.-maxillary joint.
14/2835	Empyema	Swab from empyema	Gram positive cocci	Coccal vaccine	Wagga District Hospital.....	Course, two weeks. 30 mill., 60 mill., 100 mill.	Cured	Aspiration of chest. Last pus sterile.
14/2335	Empyema in generalised streptococcal infection.	Agar culture from empyema.	<i>Streptococcus</i>	<i>Streptococcus</i>	Coast Hospital	Initial dose 25 mill., followed at weekly intervals; second dose, 25 mill.; third dose, 50 mill.; seventh dose, 75 mill.; eleventh dose, 100 mill.	Improved	.....
14/3642	.....	Later—Agar cultures from empyema sinus.	<i>S. aureus</i> and <i>B. proteus</i>	Mixed vaccine	.....	Later—Vaccine, eight doses given. Course, about five months.	.....	.....
14/1974	Pulmonary tuberculosis (?) and empyema.	Pus from pleura	<i>Streptococcus</i>	<i>Streptococcus</i>	Coast Hospital	Course, about two months. 50 mill., increasing to 150 mill.	Marked improvement	Patient discharged with sinus quite healed. Subsequently (21-10-14) broke down and discharged slightly.
14/2697	Pulmonary sinus due to retained drainage tube (empyema).	Later—Culture of streptococci from pleura.	<i>B. proteus</i> and coliform bacillus.	Mixed <i>B. proteus</i> and coliform bacillus.	Coast Hospital	Second course (four months later)—Duration, one month. 100 mill., increasing to 400 mill.	Improved; discharge much less.	Operation refused.
14/4366	.....	Later—Further culture.	<i>B. proteus</i> and diphtheroid.....	Mixed vaccine	.....	.....	.....	.....

## PULMONARY System—continued.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared.	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/3872	Chronic catarrhal pharyngitis and laryngitis.	Sputum .....	Gram negative coccobacillus; positive diplococcus.	Mixed gram negative coccobacilli and positive diplococcus.	Dr. G. Mason .....	Course, six weeks. Beginning with 25 mill., and increasing to 50, 75, 100 mill., weekly injections.	Slight improvement.....	Open air treatment, sleeping out, alimentation. Patient is subject to congestion of throat, often of lobar character. The expectoration became more stringy after the inoculations began.
14/3395	Chronic laryngitis .....	Sputum .....	Gram positive coccus .....	Gram positive coccus .....	Dr. Deck .....	Course, two months. 5 mill. of coccil at intervals of ten days.	Unimproved .....	
14/3136	Chronic naso-pharyngeal catarrh.	Sputum .....	<i>Streptococcus</i> ; gram negative bacillus.	<i>Streptococcus</i> .....	Dr. Deck .....	Course, six weeks. Dose, 5 mill. ....	Gradual improvement.....	Gradual improvement, but no marked reaction noted. Cannot say vaccine did much good. No rise of temperature, but after each injection malaise for twelve to twenty-four hours.

## ABDOMINAL Conditions.

14/2191	Ischio-rectal abscess.....	Pus .....	<i>S. aureus</i> and <i>E. proteus</i> .....	Mixed <i>S. aureus</i> and <i>E. proteus</i> .	Newcastle Hospital .....	.....	.....	Condition serious, sepsis.
14/4817	Appendiceal wound.....	Pus swabbing .....	Small gram negative bacilli (not coliform).	Gram negative bacilli.....	Wagga Hospital .....	.....	.....	
14/26	Sinus after suppurative appendicitis, age 8 years.	Pus from sinus .....	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Dr. MacLennan .....	Not used .....	Nil .....	No result on account of fact subsequently discovered that cause was really due to presence of two small stercoliths removed by curettage of sinus.

## DISEASES of the Female Pelvic Organs.

14/1465	Puerperal septicaemia and pneumonia.	Swabbing from uterine cavity.	Coliform bacilli (of <i>E. acidifaciens</i> and <i>E. coli communis</i> types).	Coliform .....	Dr. D. Christie .....	Patient died before receipt of vaccine.....	.....	Temperature 104 deg. when vaccine treatment commenced. Came down same day. Remained normal for three days. Then 101 deg. Then normal for eighteen days, when pyuria and fever developed, yielding to urotropin. Other treatment—Douching, quinine, &c., synchronous and before.
14/2322	Puerperal septicaemia .....	Culture from uterine cavity.	<i>Streptococcus</i> .....	<i>Streptococcus</i> .....	Coast Hospital .....	Course, fourteen days. Three injections—50, 50, 100 mill.	Cured.....	
14/2380	Puerperal septicaemia .....	Culture from uterine cavity.	<i>Streptococcus</i> .....	<i>Streptococcus</i> .....	Coast Hospital .....	.....	.....	
14/3381	Puerperal septicaemia .....	Agar subculture from blood culture.	<i>Streptococcus</i> .....	<i>Streptococcus</i> .....	Coast Hospital .....	Course, two weeks. 20, 50, 50, 100 mill., at intervals of four to five days.	.....	Patient died. History of miscarriage following continued sickness. Necrotic placenta removed. Steady decline. Uninfluenced by any treatment. Patient died.
14/2310	Puerperal septicaemia .....	Swabbing from uterus. Month later — Pus from pelvic abscess.	<i>Streptococcus</i> .....	<i>Streptococcus</i> .....	Dr. Vickers .....	Three doses of 25 mill. of streptococcus vaccine were given at four day intervals.	.....	
14/4627	Puerperal septicaemia after placenta previa with adherent placenta.	Culture from uterus Culture from blood ...	<i>Streptococcus</i> .....	<i>Streptococcus</i> .....	Dr. Hughes .....	One injection given .....	.....	Patient died two days after injection.
14/2879	Puerperal pyemia and pelvic peritonitis.	Culture from abscess of breast.	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Coast Hospital .....	One injection of 50 mill. ....	.....	Patient died two days after only injection.

## DISEASES of the Female Pelvic Organs—continued.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared.	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/3947	Puerperal sepsis	Blood culture, uterine swabbing.	A few colonies of <i>S. aureus</i> and <i>albus</i> , small micrococci.	Small micrococcus	Dr. Brierley	Course, two weeks. 100 mill. repeated in two days, and dose increased every third day up to one dose of 500 mill.	.....	Patient died. Patient said she felt better after vaccine. After first dose a free discharge of pus from uterus. After fourth dose temperature came down to normal, and all toxæmia seemed to disappear. Patient was very weak, and unable to take much nourishment. Died from asthenia.
14/83	.....	Pus from vaginal (uterine-) swab.	Streptococcus; coliform bacillus; diphtheroid	Streptococcus	Dr. Ken Herring	.....	.....	Patient died before receipt of vaccine.
14/4521	Endometritis	Vaginal swab.	Several kinds of micrococci.	Mixed micrococcus vaccine	Balmah Hospital	No record	Cured.	Other treatment, curetage.
14/4521	Septic abscess	Vaginal swab.	<i>B. pyocyaneus</i> .	<i>B. pyocyaneus</i> .	Balmah Hospital	1, 2, 3, 1 ampoule. Increased at intervals of five days. (Ampoule=500 mill.)	Improved	Tonics.
14/1019	Gonorrhoeal rheumatism	Vaginal swab	Coccus and diphtheroid bacillus.	Diphtheroid bacillus	Balmah Hospital	Course, eight weeks. 25, 50, 75 mill. every fourth day. 50, 50, 100, 100, 100 mill. every third day.	Improved	Pot. iod. Cyllin deuches.
14/74	Wound after hysterectomy for sloughing fibroid.	Month latter—Vaginal swab.	Streptococcus and diphtheroid.	Streptococcus.	Dr. Vickers	.....	.....	There was very marked uterine discharge of pus which dated from septic confinement three years previously. The joint lesions rapidly followed.
14/95	Chronic osteoarthritis	Pus from uterus	<i>B. proteus</i> and coliform bacillus.	Mixed vaccine	Dr. Throby	Course, two months. 10 mill. up to 50 mill.	No obvious improvement.	
14/272	Bacilluria	Urine	Coliform bacillus	Coliform bacillus	Dr. Harvey	Course, four weeks. Six doses at intervals of five to ten days of 50 to 250 mill.	Cured.	Tub. bacilli negative. Intermittent attacks of renal pain. Frequency and slight risks of temperature. Other treatment—Ammonium benzoate gr. X, four times daily, before and synchronous with vaccine. The improvement was at once noticeable and very marked after the vaccine; for three weeks before then no change. Specimen of urine sent four weeks after commencement of vaccine reported sterile.
14/1748	Bacilluria	Urine	Coliform bacillus	Coliform bacillus	Dr. Mason	Course, five weeks. 15, 25, 50, 100, 250, 250, 250, 500 mill.	Improved	Improvement began before vaccine treatment commenced. Temperature and pulse falling by lysis. Subject to repeated attacks, latterly every three or four weeks, attended by high temperature and vomiting, followed by pain and tenderness, especially over kidneys, lasting seven to fourteen days, and falling by lysis.
14/2459	Bacilluria	Urine	Coliform bacillus	Coliform bacillus	Dr. Woods	Six doses at weekly intervals 500 mill. per dose.	Unimproved.	Treated also with mixture containing urotropin and ac. soda phosph. before, synchronous with, and after vaccine treatment. Patient was subsequently treated in Sydney, with only slight improvement. Still has bacilluria.

## URINARY Tract.



## URINARY Tract—continued.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared.	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/240	Bacilluria, with pregnancy...	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Dr. Robertson.....	300 mill., increasing by 30,000 each dose, at intervals of three days for six weeks.	Clinically good. All symptoms disappeared. Bacilluria still present.	Pregnant six months. Having rigors and some sweats. Marked reaction to first few doses, gradually diminishing.
14/2756	Bacilluria, with pregnancy.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Dr. Ellis.....	Vaccine not used.....	.....	Pus cells. Trace of albumin. This is the most successful case I have had for some time.
14/3296	Bacilluria, with pregnancy.....	Urine.....	Coliform bacillus, diptheroid.....	Coliform bacillus.....	Dr. C. Read.....	Course, about twelve weeks. 100, 250, 500 mill., and subsequent doses 500 mill. Urotropin. Rest in bed.	Great improvement.....	Patient had daily rigors, and was acutely ill, with temperature 104 deg., &c. After two injections all rigors ceased, although medicinal treatment alone had done no good. Patient went to full term and had a normal confinement.
14/3757	Bacilluria, with pregnancy.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Dr. Archdall.....	.....	.....	Other treatment—Alkalis and urotropin.
14/4267	Pyelitis (pregnancy, five months).	Urine.....	Coliform bacillus.....	Coliform bacillus.....	.....	.....	.....	Pus in urine.
14/3292	Pyelitis, a month after child-birth.	Urine.....	Coliform bacillus (of <i>B. paratyphosus</i> type, but not agglutinating with paratyphoid A or B sera).	Coliform bacillus.....	Coast Hospital.....	Course, about six weeks. 50, 75, 100, 150, 200 mill.	Cured.....	.....
14/40	.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Coast Hospital.....	.....	.....	.....
14/105	.....	Urine.....	Coliform bacillus, <i>S. aureus</i> .	Coliform bacillus.....	Coast Hospital.....	.....	.....	.....
14/243	.....	Urine.....	Cocci bacillus (acid formed in sugars, no gas).	Coliform bacillus.....	Wagga Hospital.....	.....	.....	.....
14/486	.....	Urine.....	Coliform bacillus, <i>B. proteus</i> .....	Coliform bacillus.....	Dr. Pirie.....	.....	.....	.....
14/704	.....	Urine.....	Streptococcus and coliform bacillus; later coliform bacillus only.	Coliform bacillus.....	.....	.....	.....	.....
14/1082	.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Balmuir Hospital.....	.....	.....	.....
14/1215	Bacilluria (cystitis and urethritis).	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Dr. G. L. O'Neill.....	No data.....	Cured.....	Had received urotropin prior to vaccine without effect.
14/1436	.....	Urine.....	Gram negative coccus (found on two separate occasions).	Coliform bacillus.....	.....	.....	.....	.....
14/2512	.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Parramatta Hospital (Dr. Bowman).	One ampoule containing 1 c.c. with 500 mill. bac. Three injections, seven days apart. Patient did not undergo vaccine treatment.	Complete recovery.....	Numerous pus cells.
14/3681	.....	Urine.....	<i>S. aureus</i> .....	Coliform bacillus.....	Dr. A. G. Cooley.....	.....	.....	Pus cells; tub. bacilli not detected.
14/37.9	Bacilluria.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Dr. Mecke.....	Course, about four months. 100 mill. initial dose, gradually increased to 500 mill.	Much improved.....	Pus cells present. The acute symptom cleared up, but the bacilluria remained unaffected.
14/3914	Bacilluria of long standing, supervening on a calculus pyelitis.	Urine.....	Coliform bacillus, streptococcus.	Coliform bacillus.....	Dr. C. L. O'Neill.....	Course, two months. 50 mill. to 500 mill. at weekly and bi-weekly intervals.	No noticeable result.....	Pus cells present. Other treatment—Urotropin.
14/3219	.....	Urine.....	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Wagga Hospital.....	Vaccine not used.....	.....	The only record returned is very satisfactory progress after using six ampoules of the first vaccine.
14/4325	.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Coast Hospital.....	.....	.....	.....
14/4344	.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Coast Hospital.....	.....	.....	.....
14/4446	.....	Urine.....	From first sample, coliform bacillus of Friedlander's type; from second sample, coliform bacillus of <i>B. lortii aerogenes</i> type.	Coliform bacilli (both types as two vaccines)	Cessnock District Hospital.....	.....	.....	.....
14/4588	.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	.....	.....	.....	.....
14/4802	Coliform bacilli in urine.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	S. M. Mission.....	Patient discontinued treatment Course, four weeks. 2 mill. first injection, then every five days, increasing by a couple of mill. No other medicinal treatment.	Cured.....	Pus in urine.
14/4842	.....	Urine.....	Coliform bacillus, streptococcus.	(1) Coliform bacillus, (2) streptococcus.	Wagga Hospital.....	Vaccine not used.....	.....	.....
14/1003	.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Dr. Stewart.....	.....	Good results obtained.....	Laparotomy previously for stone in kidney and pyonephritis.
14/1088	.....	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Dr. Robertson, Seacombe Private Hospital.	.....	Improvement.....	The nephritis was treated in the usual way. Pus disappeared from urine and culture showed no B.C.C. after an interval of some weeks.
14/1200	Bacilluria, complicating a subacute nephritis.	Urine.....	Coliform bacillus.....	Coliform bacillus.....	Dr. Archdall.....	Course, one month. 100, 250, 500 mill., &c.	.....	.....

## URINARY TRACT—continued.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared.	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/1984	Bacilluria and pulmonary tuberculosis.	Urine	Coliform bacillus	Coliform bacillus	Dr. Harbison	Course, one month. 500 mill. per dose	Unimproved.	Other treatment—Morphia and hyoscin with chloral, and pot. bro., synchronous with vaccine.
14/1585	Delirious mania tending to become chronic.	Urine	Coliform bacillus	Coliform bacillus	Dr. Harbison	Course, two and a half months. 15 mill. to 500 mill. at intervals of four-seven days.	Improving	The only result in this case was marked local (?) improvement in the limb where the first injection was given, pain and swelling disappearing from joints. Constitutional disturbance was marked after each dose, and considerably weakened the patient.
14/1470	Chronic rheumatoid arthritis	Urine	Coliform bacilli (two types).	Mixed coliform bacilli	Dr. Watson-Harvey	Course, three weeks. Six ampoules	Marked local (?) improvement.	Other treatment—Large doses of pot. cit. and Tr. Hyoscy, given by mouth. The recovery in this case was really remarkable. There is occasional pain only. The third specimen of urine examined was sterile.
14/914	Pyelitis	Urine	Coliform bacillus	Coliform bacillus	Dr. Archdall	Course, six weeks. 100, 250 mill., subsequent doses 500 mill. Injections twice weekly.	Cured	Severe pain. Tub. bacilli not detected.
14/1944	Pyelitis	Urine	Coliform bacillus	Coliform bacillus	Dr. N. Larkins	Vaccine not used		Local application to renal pelvis by ureteral catheterism. Prior to vaccine treatment.
14/2379	Pyelitis	Urine	Coliform bacillus	Coliform bacillus	Dr. Hilton Smith	Vaccine not used	Improved	Other treatment—Urotropin, with sod. ac. phos. Before and synchronous with vaccine treatment.
14/4551	Pyelitis	Urine	Coliform bacillus	Coliform bacillus	Dr. Larkins	Course, three months. Commenced with 50 mill., and by increase weekly of 50 mill. increased to 800 mill.	Recovery	Originally frequency, smarting, turbid urine, slight albumin.
14/4994	Pyelitis	Urine	Coliform bacillus	Coliform bacillus	Dr. Kirkwood	Course, about eight weeks. Initial dose 2 1/2, 5, 7 1/2, 5, 5 mill.		Other treatment—Urotropin and alkalis.
14/4090	Cerebral hemorrhage and pyelitis.	Urine	Coliform bacillus	Coliform bacillus	Coast Hospital	Course, about ten weeks. 50 mill., 3rd Nov., 1914; 100 mill., 7th Nov., 1914; 200 mill., 19th Nov., 1914; 300 mill., 29th Nov., 1914; 400 mill., 11th Dec., 1914; 500 mill., 22nd Dec., 1914; 500 mill., 8th Jan., 1915.	No urinary symptoms on discharge.	Acid sod. phos. Internally.
14/47	Infection of kidney	Urine	Coliform bacillus (acid only on glucose, mannitol, and lactose, with no reaction on dulcitol or saccharose).	Coliform bacillus	Dr. A. G. Cooley	Course, three weeks. 100 mill. in each dose once a week.	Complete cure	
14/762	Infection of kidney	Urine	Coliform bacillus	Coliform bacillus	S. M. Mission	Course, six weeks. 250 mill. at intervals of a week. No other treatment.	Complete recovery	Patient has been splendid ever since.
14/4016	Infection of kidney	Urine	Coliform bacillus	Coliform bacillus	Molong Hospital (Dr. Michell)	Course, seven weeks. 250 mill. (impossible to increase dose, as it gave too much reaction.)	Cured. Patient improved very much, losing all pain and tenderness.	Clinically an acute infection of the kidney.
14/2862	Pus in kidney	Urine	Coliform bacillus	Coliform bacillus	S. M. Mission	Course, three weeks. First dose, 100 mill.; second dose, 300 mill.; remaining doses 500 mill. Two doses per week.	Unimproved	Disappearance of coliform bacilli from urine.
14/857	Cystitis	Urine	Coccobacillus (acid on glucose, no reaction on mannitol, dulcitol, lactose, or saccharose).	Coccobacillus	Dr. L. Parker			Other treatment—Urotropin and cystopurin, salol. Condition of about twelve months' standing. Apparently from post-operation catheterisation. Frequency, recurrent attacks of painful micturition, pus in acid urine.
14/1357	Cystitis	Urine	Coliform bacillus	Coliform bacillus	Dr. Archdall	Course, two months. 100, 250 mill. Subsequent doses 500 mill.	Cured	Tub. bacilli not detected. Other treatment—Pot. cit. The first few doses seemed to relieve the troublesome frequency, and the patient seemed rapidly to get well.



## URINARY TRACT—continued.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared.	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/2863	Cystitis .....	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Dr. Archdall .....	Three doses, 100, 100, 200 mill. Other treatment—Urotropin and acid mixture.	Relief of symptoms (apparently cured).	In each case the injections caused a focus of suppuration at site of injection, though greatest care and asepsis were used. Patient refused to have more than three injections.
14/3295	Cystitis .....	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Dr. Ellis .....	Course, three weeks. Initial dose of 30 mill. followed every two days by an increased dose till 600 mill. (last dose).	Cured .....	Blood in urine; later pus which had commenced to clear before vaccine treatment. Urotropin, &c. Bladder washed out.
14/3297	Cystitis .....	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Dr. C. Read .....	Course, nine weeks. 25 mill., severe reaction, 11, 13, 22, 25, 44, 66, 100, 135, 250, 350, 425, 500 mill.	Recovery .....	Pus cells; tub. bacilli not detected. Other treatment—Urotropin and pot. cit. mixture, which was discontinued soon after the commencement of vaccine treatment. Patient a child aged 8 years.
14/4135	Chronic cystitis .....	Urine .....	<i>S. aureus</i> , coliform bacillus .....	(1) <i>S. aureus</i> , (2) coliform bacillus.	Goulburn District Hospital .....	Course, about six weeks. <i>S. aureus</i> —Initial dose 200 mill., increased 100 mill. each time and given every seven days alternating with B.C.C. injection. Coliform—Initial dose 30 mill., and increased 20 mill. each time and given every seven days. Six injections given.	Much improved .....	Before, during, and after vaccine treatment, patient had been on milk foods only.
14/4368	Cystitis .....	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Dr. H. Smith .....	Course, about two months. Twelve injections of 500 mill. each.	Abolition of symptoms.	Symptoms almost gone; still a little pus and bacilli in urine.
14/4959	Cystitis from coliform bacilli complicating enteric fever.	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Dr. Vallack .....	Course, two and a half weeks. 100 mill. first dose, 200 mill. second dose, 250 mill. rest of doses, given every second day.	Much improved .....	Improvement began after third dose. Alkalis, urotropin, &c.
14/3963	Pyelitis and cystitis .....	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Coast Hospital .....	Course, seven weeks. 50, 100, 150, 200, 300, 400, 500 mill., at weekly intervals.	Cured .....	Other treatment—Cysto-purin, pot. cit., buchu, barium for artificial menopause.
14/3160	Bacilluria and pyuria .....	Urine .....	Gram negative bacillus, <i>B. proteus</i> .	Mixed vaccine of gram neg. bacillus and <i>B. proteus</i> .	Young Hospital .....	Course, three weeks. Initial dose 50 mill.; five days interval, 100 mill.; five days interval, 150 mill.; seven days interval, 200 mill.	Cured .....	Pus in urine. Urine became quite clear and remained so after fourth injection. Other treatment—Urinary antiseptics and alkaline diuretics internally.
14/892	Infection of urinary tract and right kidney.	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Paramatta Hospital .....	Course, about two months. Initial dose, 250 mill., then 250, 350, 400, 450, and 500 mill.	Much improved; bladder condition somewhat better.	Considerable local reactions in kidney and bladder.
14/899	Infection of urinary tract .....	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Bahain Hospital .....	Course, six or seven weeks. First dose, 100 mill., second dose, 250 mill. Subsequent doses, 500 mill.	Improved .....	Other treatment—Pot. cit. Patient was also suffering from some chronic endometritis, which necessitated curettage. She has to work hard for her living, and this, to a certain extent, interfered with recovery. Pus disappeared from urine. Not used. Patient developed pneumonia, with fatal result.
14/4943	Puerperal sapremia .....	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Dr. J. Macpherson .....	Vaccine not used .....	.....	Other treatment—Urotropin.
14/1696	Pain in kidney region .....	Urine .....	Streptococcus .....	Streptococcus .....	Dr. N. Smith .....	Course, five weeks. Dosage, as directed by Department, (i.e. 500 mill. every 3-4 days.)	Left hospital apparently cured.	
14/4060	Gleet .....	Urine .....	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Maitland Hospital .....	Course, twenty-five days. Initial dose, 500 mill., increased by 500 mill. every five days for six doses.	.....	Am unable to state if patient was benefited. I have not seen her for a long time.
14/4421	Renal colic .....	Urine .....	Coliform bacillus .....	Coliform bacillus .....	Dr. Sutherland .....		.....	



## VARIOUS.

No.	Disease.	Specimen.	Organism found.	Organism from which vaccine was prepared	Reporter.	Course, Dosage, &c.	Result.	Notes.
14/4546	Joint and muscular pains, following gonorrhoea.	Urethral discharge.....	Gram positive diphtheroid bacillus.	Gram positive diphtheroid bacillus.	Dr. G. A. Paton .....	Course, about seven weeks, 50, 100, 250, 250, 300, 300, 400, 500 mill. about every six days.	Improved .....	Pains not much influenced. Gleet discharge lessened.
14/333	Arthritis deformans and Still's Disease, complicated by scarlet fever and an abscess, evidently accidental, during convalescence.	Pus from abscess of thigh.	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Coast Hospital.....	Course, about five months. Initial injection, 25 mill., increased to 150 mill.	Practically cured .....	Well marked case of Still's Disease (complicated by scarlet fever), enlarged glands, and spleen with swollen joints. Small joints chiefly affected. Exceedingly wasted after scarlet fever. In good condition and walking about, though joints still enlarged, and other signs present in slight degree.
14/3534	.....	Pus .....	Diphtheroid (acid on glucose, nil on saccharose).	Diphtheroid .....	Marickville Hospital .....	Vaccine not used.....	.....	Patient recovered before receipt of vaccine.
14/2885	Septic leg .....	Blood and pus .....	Streptococcus .....	Streptococcus .....	Balmah Hospital .....	Course, twenty-three days .....	Cured.	.....
14/3697	Septic endocarditis .....	Broth blood culture...	Streptococcus; <i>S. aureus</i> ; <i>S. albus</i> .	Streptococcus; <i>S. aureus</i> .....	Dr. Brooks (Western Suburbs Cottage Hospital).	Course, three weeks. Initial dose of 5 mill., followed three days later by 10 mill.; four days interval, then 20 mill.; four days interval, then 30 mill.; five days interval, then 40 mill.	No appreciable result...	Patient gradually got weaker and weaker.
14/4794	.....	Swabbing .....	<i>S. aureus</i> .....	<i>S. aureus</i> .....	Newington Asylum .....	Patient died before receipt of vaccine.....	.....	.....
14/3851	Acute septic meningitis.....	Cerebro-spinal fluid ...	Streptococci .....	Streptococci .....	Dr. Scott Good.....	Patient (baby) died before receipt of vaccine	.....	.....
14/3530	Cerebro-spinal meningitis..	Cerebro-spinal fluid ...	Gram positive coccus .....	Gram positive coccus .....	Dr. Ellis .....	Course, four days. Initial dose, 6 mill. Slight reaction, temperature 99 deg. Second dose, four days later, 9 mill. No reaction. No further doses given.	Unaffected .....	Other treatment — Urotropin, bromides, and blisters. Rest and quietness. Rectal and nasal feeding. Child recovered, except for persistence of Kerning's sign before arrival of vaccine. This sign soon cleared up after administration of vaccine.

## DIVISION II.—Pathological Conditions of Animals (including Man).

## 7. NECROTIC DERMATITIS OF SHEEP.

(J. B. CLELAND.)

In the second report of the Government Bureau of Microbiology for the years 1910 and 1911 (p. 95) this disease of sheep is fully described and its resemblance to fagopyrismus noted. The following reference to the complaint and description of its supposed etiological cause, with which I do not agree, is of interest.

R. V. Lendenfeld, Ph.D., in the Proceedings of the Linnean Society of New South Wales (Vol. 40, 1885-6, p. 35), describes *Amaba parasitica*, a new protozoan infesting sheep. He had been commissioned to investigate some diseased sheep at Quirindi, on the Liverpool Plains, and near Young. The disease, he states, appears "very similar to epithelial cancer, and was met with on the foot behind the hoof, and also on the lips and nostrils and the gums of the lambs. The epithelium in these places grows with pathological rapidity, the horny layer produced soon attains a thickness of 3 to 5 mm., the wool drops out in the diseased parts and below the thick outer layer a festering process sets in. After some time a new epithelium makes its appearance below the festering layer. Then, provided the lamb does not die, the thick horny layer is thrown off like scurf and the epithelium below attains new wool and replaces the old skin—the lamb has recovered."

He considered that these sheep had invariably been exposed to being wounded in some way or other in the places infected, either by being blistered by standing on hot rocks after they had been standing in water, or by being pricked by spines of variegated thistle. He did not think that these traumatic influences were sufficient to be the actual cause of the disease, and thinks that it is produced by the *Amaba*, which he describes as entering the wounds and multiplying there. He states also that the disease is very infectious. He gives a plate of the parasite.

## DIVISION III.—Parasites.

## 8. A CASE OF TRICHINELLA SPIRALIS IN A MAN IN AUSTRALIA.\*

(ARTHUR PALMER, J. B. CLELAND, and E. W. FERGUSON.)

J.B., aged 60 years, coal-lumper, a native of France, but has lived in N.S.W. for over 20 years. The patient died from heart disease. The skeletal muscles were apparently universally affected with *Trichinella spiralis*, immense numbers being seen in the muscles of the chest wall, the abdomen, the head, and the upper and lower extremities. They were not seen in the heart. *Trichina* or *Trichinella spiralis* belongs to the nematoda or round worms, and is said not to exist in man or animals in Australia. Harvey Johnston and Burton Cleland in a paper jointly contributed to the Australasian Association for the Advancement of Science, refer to three recorded cases in man in Hobart, Queensland, and South Australia, and state that they all owed their origin to localities outside Australia. No doubt the case now recorded comes under the same category, as he was born in France. It is said that the disease was formerly very common on the Continent, especially in Germany, owing to the consumption of pork sausages and ham in a half-cooked state. It occurred frequently as epidemics, Manson giving the death rate as varying from 1 to 2 to 30 per cent. It is now said to be rare, not because the people have given up eating raw pork, but because of the strict supervision of slaughtered animals.

*Pathological Examination.*—The specimens submitted consisted of the sternum with muscles attached, the diaphragm, and the muscles of the arm, thigh, and calf. In all of these trichinellæ were abundant. In the heart, kidneys, and liver no trichinellæ were detected. *Macroscopically* the trichinellæ appeared as minute whitish seedlike bodies, with their long axes in the same direction as that of the muscle fibres. *Microscopically* these bodies proved to be encysted larvæ, which had become calcified. On dissolving the lime salts with hydrochloric acid, the coiled up form of the larvæ was readily distinguishable, surrounded by a fibrous capsule. The remainder of the muscle fibre appeared converted into fibrous tissue. *Kidneys:* Sections showed a moderate degree of interstitial fibrosis. The cells of the tubules were granular and degenerating, and some of the straight tubules contained casts. *Liver:* Sections showed fatty infiltration.

*Life History.*—In order to mature it is necessary that muscle containing the encysted larvæ be eaten. On reaching the stomach the gastric juice dissolves the cyst wall allowing the parasites to escape into the duodenum and jejunum where they grow into adults. The adult female measures 3-4 mm. long by 60  $\mu$  in diameter, and the male 1.4 to 1.6 mm. long by 40  $\mu$  in diameter. After copulation the males die off, and the females, increasing in size, penetrate the mucosa of the bowel until they reach a lymph channel, where they deposit their larvæ, which are born alive. One female is said (Leuckart) to give birth to 1,500 larvæ. These are carried by the blood

and

\* *Vide Aust. Med. Gaz.*, June 20, 1914, p. 546.



and lymph stream all over the body. Leaving the capillaries the larvæ now work their way into the tissues, and become encapsulated in the muscles, the attacked fibres of which degenerate, and becoming inflamed, lead to the formation of the cyst wall. The first larvæ reach the muscles on the ninth to tenth day, but further invasions are constantly taking place because the intestinal trichinellæ live from 5-7 weeks, and continue to produce their young.

*Feeding Experiments.*—Portions of the muscle were fed, chopped up in pollard, to white rats and guinea pigs. These were killed at intervals, but no evidence of intestinal worms or of muscle infection was discovered. In all probability, therefore, the larvæ were dead. On the other hand, Braun (p. 317) states that the encysted trichinellæ may remain alive and capable of development in man for 25 to 31 years.

## 9. ANTIFORMIN AS AN AID TO THE DETECTION OF HYDATID HOOKLETS IN SPUTA.

(J. B. CLELAND.)

Hydatid disease of the lungs being a not uncommon infection in Australia, specimens of sputum are frequently submitted for the purpose of ascertaining whether hydatid membrane or hooklets are present in cases where rupture of the cyst into a bronchus may possibly have occurred. In many of these cases the examination can be at once completed when laminated membrane is present. It is possible that in some cases hooklets may still be found in the sputum when visible fragments of membrane are no longer present. The use of antiformin suggested itself for these cases as a means of concentrating the more resistant elements in the sputum for microscopic examination. The case selected to test its value showed in the sputum degenerated bile-stained laminated hydatid membrane as well as several hooklets. Three c.c. of antiformin were then taken to about 2 c.c. of the sputum; the mixture was agitated for three minutes, until it became fairly clear. It was then centrifugalised for about five minutes, washed in distilled water, and again centrifugalised for about two minutes. On mounting the deposit a dozen or so hooklets were seen, which were, however, more transparent than before treatment. On repeating the procedure, but leaving the sputum in contact with the antiformin for twenty-five minutes before centrifuging for five minutes, no hooklets were seen. This result suggests that treating with antiformin for a short space of time, whilst dissolving most of the other material in the sputum, has only a slight effect upon the hooklets, thus serving a useful purpose in diagnosis, whereas if the antiformin is left for a longer period of time the hooklets also disappear.

## 10. SAGO-LIKE HYDATID DAUGHTER CYSTS IN AN ABSCESS OF THE THIGH.

(J. B. CLELAND.)

The frequent occurrence of numerous minute hydatid cysts in dense tissues, such as bone, instead of a single large cyst with comparatively few, but large, daughter cysts, is well known. An article by Professor Watson, entitled "Hydatid of Bone" (*Australasian Medical Gazette*, April, 1895, page 161) deals with a number of such cases. In the present case, a thick yellow purulent fluid was removed from an abscess in the thigh of a woman at the Coast Hospital. Suspended in the pus were a number of small sago-like vesicles, which on examination proved to be hydatid cysts. There was also a small amount of degenerated yellowish membrane, apparently representing the mother cyst. The small size of these granules, which were remarkably like grains of sago, was somewhat misleading until the diagnosis was confirmed by microscopic examination. Professor Watson states that as a rule these minute cysts in bone are unaccompanied by any mother membrane, whereas in this case this had evidently been present. It is quite possible that the abscess had really arisen in connection with the periosteum or bone in this instance, and that it had not actually originated in the softer tissues of the thigh, thus accounting for the small size of the daughter cysts.

## 11. A CASE OF "CONGENITAL" MALARIA.

(E. W. FAIRFAX and J. B. CLELAND.)

In January, 1912, blood slides from an infant were submitted by one of us (E.W.F.) to the Bureau of Microbiology for examination for parasites. Upon staining the films numerous tertian malarial parasites were detected.

The history of the case, which was under the care of E.W.F., is as follows:—The mother, an Australian, married in England, and went to the Federated Malay States and stayed there for five or six months, having several severe attacks of malaria. She then came to Sydney, and was in that city two months before the baby was born, only having two mild rigors during that time. The baby was a girl, born at full time, healthy-looking



looking, and weighing 8½ lb. Eight days after birth the infant was noticed to be pale and restless; on the ninth day the temperature was taken as the nurse thought the baby felt hot. This was found to be 100 degrees F.; a little later the skin became moist and cool. The case was first seen on the tenth day, when the infant looked pale with a little blue about the lips, but was fairly well nourished. The skin was cold and moist, and the temperature 97 degrees F. She was breast fed and had no digestive disturbances. Blood films taken on that day showed the presence of malarial parasites.

The first attack on the eighth day was indicated by the child becoming restless for a quarter to half an hour, followed by the skin becoming moist and cool. This occurred between 5 and 6 p.m.; similar recurrences also took place about the same time on the ninth and tenth days. On the eleventh day half grain of quinine sulphate was given in the morning and again at 3.30 p.m. The child became restless about 6 p.m., the skin becoming moist and cold soon after. On the twelfth day the baby was very pale; was taking the breast badly, though the bowels were regular and the motions of a good colour. Quinine sulphate was given as on the previous day, but at 3 p.m. the patient was very restless and felt hot, the rectal temperature was 102 degrees and she was pale and collapsed, later feeling moist. On the thirteenth day a grain of quinine sulphate was given at 7 a.m., at 1 p.m., and at 8 p.m.; the baby was looking better than on the previous day, and was taking the breast well. There were four stools in the twenty-four hours containing some mucus. At 5 p.m. she became restless—not nearly so marked as on the day before—and the temperature was 99.6 degrees. She became a little pale and moist, but was not collapsed. The spleen was distinctly palpable. On the fourteenth day quinine was administered as before. She vomited once. There were five stools in the twenty-four hours containing mucus and some curds; she looked very pale. A blood examination showed 70 per cent. of hæmoglobin, 3,500,000 red cells, and 8,720 leucocytes. A differential count of the leucocytes showed polymorphonuclears, 48 per cent.; large lymphocytes, 12 per cent.; small lymphocytes, 37 per cent.; eosinophiles, 1 per cent.; a few tertian parasites were seen and a little pigment. On the fifteenth and sixteenth days she had been restless for about half an hour between 4 and 5 p.m., after which she perspired for about fifteen to twenty minutes. The spleen was slightly larger. She was looking much better, and taking her food better, the bowels were regular and the motions contained a few curds and some mucus; half grain of quinine sulphate was given three times a day. On the twentieth day there had been no restlessness nor sweating since the sixteenth day, while she had gained three-quarters of a pound since the thirteenth day. Quinine was reduced to two doses in a day. No parasites were now seen in the blood films. Up to the twenty-eighth day no further attacks had occurred—she was getting on well. The quinine was reduced to one dose of half a grain a day, after which she was to have two doses a day on two days of the week for the next two months.

An examination of the blood slides submitted to the Bureau of Microbiology at the height of the attack showed a heavy infestation by tertian malarial parasites. In addition, there was considerable irregularity in the size and shape of the red cells, and occasional nucleated red corpuscles were noticed.

In a strict sense this case is not congenital, meaning thereby germ transmission. The entrance of the parasite into the circulation of the infant may have occurred in one of two ways. Either there may have been a breach in the placenta in the barriers separating the maternal blood from the foetal, thus allowing infected red cells to enter the circulation of the infant, or infection may have taken place from the maternal infected blood through the breach of surface entailed by cutting the umbilical cord, or through some slight abrasion of the infant during childbirth.

## 12. NOTES ON MOSQUITOES.

(E. W. FERGUSON.)

Throughout the year attention has been directed to the collection of species of mosquitoes. Of necessity our collecting has been confined principally to the locality of Sydney and to Milson Island in the Hawkesbury River. Very few trips were taken to the country during the year, and these were mainly in the winter, when mosquitoes were practically absent. Thus a three days' trip to Coonamble in July yielded no results, though mosquitoes were looked for and a search made in waterholes along the bed of the Castlereagh for larvæ.

Among the species collected at Milson Island, a new species (*Culicada milsoni*) has been discovered; while two or three others were not previously recorded from the Island. An unidentified species of *Pseudokusea* and one of *Grabhamia* were also obtained.

### ANOPHELINEÆ.

*Nyssorrhynchus annulipes*, Walk.—This species was obtained breeding in waterholes in a gully at Roseville, Sydney, in April. The pools were not connected and were fringed with grass and vegetation. The pools were flushed out by a rain storm a few weeks later and converted into a running stream. About fourteen larvæ were obtained on 11th April and several others two days later. The larvæ were not all of the same stage of growth. Several bred out and proved to be this species. A female was caught at Killara on 21st May, indoors, at night; the weather was cold at the time.  
more

more anophelines were seen about Sydney until early in September, when a couple were captured in a garden at Roseville, trying to bite. Another specimen was taken late in September. Since then it has not been seen. Several females were captured at Belaringar, near Nevertire, in May. They were resting on the wire doors leading from the verandah into the house. Specimens were also taken at Narromine in an outhouse during the same month. This species is not common at Milson Island, but an anopheline larva was obtained from an old dam on the Island, 31st October; unfortunately it did not breed out. Dr. Cleland met with one specimen biting at Tuggerah on 24th October. The proof of the occurrence of this species in this district is of some interest, as Tuggerah is not far from Lisarow, where an endemic case of malaria developed. A female was captured indoors at night at Wellington on 17th October.

*Pyretophorus atratipes*, Skuse.—One specimen was taken on the mainland opposite Milson Island on 28th November.

#### CULICINÆ.

*Stegomyia atripes*, Skuse.—Specimens identified by Taylor as belonging to this species were taken at Milson Island. It was first met with on the 20th November, and afterwards was present throughout the summer, though never plentiful. Specimens were taken on several occasions around a calf in an open pen; the insect always selected the moist surfaces of the nose and lips to bite, and would hover a minute with rapidly vibrating wings before settling. The species is a fairly silent flier. The note emitted is high pitched. Specimens were also taken at Blackheath in November (W. A. Thomson).

*Pseudoskusea basalis*, Taylor.—A specimen secured in October, 1911, around a calf at Milson Island has now been identified by Taylor as belonging to this species.

*Pseudoskusea* sp.—Specimens taken on the mainland opposite Milson Island on 28th November, and subsequently on the Island itself, have been identified by Taylor as belonging to this genus.

*Scutomyia notoscripta*, Skuse.—This species appears to be present on Milson Island during the greater part of the year. It has been bred at various times from collections of water about the houses. It is a fairly vicious biter and seems to prefer the early morning, though specimens may be taken in certain localities throughout the day. It is also common in the scrub on the mainland. A specimen was taken at Wellington on 17th October biting a sick dog.

*Grabhamia theobaldi*, Taylor.—At Belaringar (May) specimens were taken biting in the bush. A specimen was also taken at Trangie.

*Grabhamia* sp.—Specimens taken at Roseville (August), Sydney (October), and Hawkesbury River (November) have been identified by Taylor as belonging to this genus.

*Culex fatigans*, Wied.—About Sydney this species appears about the end of October, thence becoming plentiful throughout the summer. It begins to diminish in numbers about April, and though specimens may be taken in May and June, they are generally found resting on the walls and not biting. Probably specimens remain hidden in dark corners throughout the winter. It was met with breeding at Belaringar (Nevertire), Buddahbudah (Bogan River), and Narromine in May. In the latter locality every collection of water around the buildings was swarming with larvæ.

*Culex tigripes*, G. and C.—Bred out from larvæ found in traps about a cottage and in an old well on Milson Island (May).

*Culex frenchi*, Theob.—A specimen of this species was captured on 28th November, 1914, on the mainland opposite Milson Island.

*Culex australis*, Er.—Two specimens of this species were captured at Blackheath in November (W. A. Thomson).

*Culex sagax*, Skuse(?)—Belaringar, near Nevertire. This species was not uncommon in the belts of timber bordering the blacksoil plains. Unfortunately all the specimens obtained were more or less rubbed, and the identification is not certain.

*Culex rubrithorax*, Macq.—Bulli (May), Tuggerah (October). This mosquito is only found in the bush, preferring dense scrub, and never occurs around dwellings.

*Culex occidentalis*, Skuse.—This species occurs on Milson Island throughout the greater part of the year, breeding in two old wells, in company with *Culicada cumpstoni* and *Culicada milsoni*.

*Culicelsa alboannulata*, Macq.—This species appears to be more common in the autumn and spring than in the hot weather. It was found breeding in the gullies at the back of Roseville in April, and again in August and September. It was also found breeding in tins in the backyard in April and May. Larvæ were obtained at Milson Island on 23rd October.

*Culicelsa vigilax*.—Milson Island, Tuggerah, Gosford, Bulli, Sydney. During the summer this species is by far the commonest on Milson Island. It appeared about October, but did not become numerous till the end of the year. As a rule it was scarce during the heat of the day, except in shaded spots, where it was numerous and vicious; it was numerous in the gullies on the mainland. At dusk individuals became very numerous and continued to bite viciously for about half to one hour, when they became less numerous. They seem to travel over to the Island from the mainland, as it was noticed that



that they appeared on board of a rowing boat anchored in midstream. In the early morning the species was again much in evidence. This species was not found breeding on Milson Island, but larvæ and pupæ found in brackish water on Rabbit Island proved to be this species (31st October).

*Culicelsa annulirostris*, Skuse.—Specimens were taken at Milson Island on 1st December, biting at dusk. The species was fairly numerous along the banks of the Namoi at Narrabri in March, biting at dusk.

*Culicada milsoni*, Taylor.—This species has so far only been obtained at Milson Island. There, however, it is comparatively common, especially around the buildings on top of the Island. It occurred throughout the summer, and bred in water collections around the buildings and in two old wells. It was often found in company with *C. occidentalis* and *C. cumpstoni*.

*Culicada cumpstoni*, Taylor, var.—Specimens bred from an old well on Milson Island in October were identified by Taylor as a variety of *C. cumpstoni*. The species was also taken on the mainland in November. In all probability this species has not been separated from *C. occidentalis* in my records of the occurrence of the latter species.

*Culicada victoriensis*, Taylor (?), var. (?)—A specimen bred from a pool on the mainland opposite Milson Island (12th December, 1914) has been identified by Taylor, with some doubt, as this species.

*Culicada annulipes*, Taylor.—A single specimen was taken at Roseville (Sydney) in August.

*Culicada inornata*, Strickland.—Specimens taken at Adelaide (South Australia) in July (J.B.C.) have been identified by Taylor as this species. According to Edwards, Strickland's name is a synonym of *C. labeculosus*, Coq.

*Culicada fergusoni*, Taylor.—Larvæ evidently belonging to this species were found in a pool at Roseville (April). Larvæ were also obtained at Milson Island in October, and one specimen hatched out.

*Culicada* sp.—A single female captured at Bulli (May) has been identified by Taylor as belonging to a new species of *Culicada*.

*Cænocephalus concolor*, Taylor.—This species was breeding freely in the rock pools at the Coast Hospital, Little Bay, in December.

### 13. NOTES ON TABANIDÆ.

(E. W. FERGUSON.)

The Laboratory collection contains now about thirty-five (35) species of March flies, most of them collected in the vicinity of Sydney or the Hawkesbury River. A few species have been received from Mr. F. H. Taylor, of the Australian Institute for Tropical Diseases, Townsville, and a few from Cape York, collected by Dr. Macgillivray, of Broken Hill. The majority of the specimens have been sent to the Imperial Bureau of Entomology, London, for identification, and a few have been returned named by the authorities there, to whom we are much indebted.

#### SUB-FAMILY PANGONINÆ.

*Pangonia clavata*, Macq.—Two females sent by Mr. G. Lyell, of Gisborne, Victoria, and taken on 21st February, 1915.

*Erephrosis jacksoni*, Macq.—A specimen was obtained on the mainland opposite Milson Island, Hawkesbury River, on 29th November, 1913. It was caught in the act of biting, and it was noted that the insect started to pierce the skin whilst still hovering.

*Diatomineura minima*, Ricardo.—Two males of this species have been obtained at Sydney (27th October, 1913, and 26th November, 1914).

*Diatomineura inflata*, Ricardo.—A single female taken at Sydney.

*Diatomineura brevirostris*, Macq.—Two females were taken at Blackheath, Blue Mountains, in November, 1914 (W. A. Thomson).

*Diatomineura auriflua*, Donovan.—This species was not uncommon about Roseville (Sydney), in November, 1914. The collection contains two males and one female.

*Corizoneura chrysophila*, Walk.—One female taken at Roseville (C. Gibbons) in January, 1914.

*Demoplatus australis*, Ric. (MS.).—Three males taken at Milson Island on 31st March and 11th April.

*Demoplatus trichocerus*, Macq.—One female taken at Roseville (Sydney), resting on a fence, 4th March, 1915.

*Ectenopsis vulpecula*, Wied.—A female of this species was taken at Maclean, Clarence River, resting on a low bush (November, 1913). Three females were taken at Roseville (25th December, 1914) on the flowers of *Bursaria spinosa*.

*Silvius australis*, Ricardo.—Several specimens of this species were among Dr. Macgillivray's collection.

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## SUB-FAMILY TABANINÆ.

*Tabanus vetustus*, Walker.—A single specimen was taken on Milson Island in April, 1914, biting a horse which had been injured by falling over some rocks. We are indebted to Mr. Arthur White, formerly of Tasmania, for the identification.

*Tabanus cinerascens*, W. S. Macleay.—Port Darwin. Presented by F. H. Taylor.

*Tabanus taylori*, Austen.—Townsville. Presented by F. H. Taylor.

*Tabanus pseudo-ardens*, Taylor.—Kuranda, Q. Presented by F. H. Taylor.

*Tabanus nigratarsis*, Taylor.—Cape York, Q. Presented by Dr. Macgillivray.

*Tabanus sanguinarius*, Bigot.—Richmond River.

*Tabanus regis-georgii*, Maeq.—Milson Island, Rydalmere (Sydney). This species was not uncommon on the cattle and a horse on Milson Island. As a rule it preferred the under part of the hock to settle on. Similarly, I have several times taken them on my ankles.

*Tabanus oculatus*, Ric. (MS.).—This species was taken on a horse at Milson Island (20th January, 1915). The eyes are bright green when alive.

*Tabanus circumdatus*, Walk.—Sydney, Hawkesbury River, Helensburgh, Gisborne (Victoria). This is the common bush tabanid about Sydney; specimens have been taken from January to March.

## 14. POLLEN GRAINS (?) IN THE LUNG OF A CHILD.

(J. B. CLELAND.)

In the *Australasian Medical Gazette*, 21st June, 1909, I have recorded a case of the sudden death of a girl, 12½ years of age, a patient of Dr. Badoek, of Perth (Western Australia), in which at the post-mortem a staphylococcal pneumonia and pleurisy was detected, and, in addition, microscopically, a mass of thirty or forty oval collapsed bodies in the affected lung, which resembled somewhat the ova of a worm. These bodies had been submitted to Dr. Leiper, Helminthologist of the London School of Tropical Medicine, who stated that they were certainly not helminthic, and considered them probably to be extraneous. Having kept these slides, I submitted them in 1912 to examination by my former colleague, Mr. Ewen McKinnon, to see if he could recognise if they were of vegetable nature. He has kindly examined them, and has come to the conclusion that they are in all probability grains of pollen. They measured about  $23\mu$  by  $20\mu$ , and were somewhat pear-shaped in outline, with a blunt, narrow end. It seems quite possible that the inhalation of these small foreign bodies may have at the same time introduced *Staphylococci*, which were responsible for the pneumonia, and thus the fatal issue.

[7 Photos ; 7 Diagrams].

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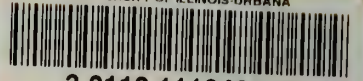








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